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PROCEEDINGS
OF THE
AMERICAN ORIENTAL SOCIETY,
AT ITS
MEETING IN NEW YORK, N. Y.,

March 29th, 30th, and 31st, 1894.

THE Society assembled at New York, in the Room of the Trustees of Columbia College, on Thursday of Easter Week, March 29th, at 3 P. M., and was called to order by its President, President Daniel Coit Gilman of the Johns Hopkins University. Professor Henry Drisler welcomed the Society to New York and to the hospitalities of Columbia College.

The following members were in attendance at one or more of the sessions :

Adler	Dickerman	Jackson	Rudolph, Miss
Arbeely	Drisler	Jastrow, Jr., M.	Smith
Arnold, W. R.	Elwell	Kent	Smyth
Babbitt	Fay	Lanman	Steele
Barton	Frame	Levias	Torrey
Binney	Frothingham	Lyon	Toy
Bloomfield	Gilman	Macdonald	Ward, W. H.
Bradner	Goodwin, C. J.	McConnell, Mrs.	Watson
Briggs	Gottheil	Myer	Webb
Brinton	Grieve, Miss	Oertel	Werren
Carpenter	Hall, I. H.	Olcott	Williams
Casanowicz	Haupt	Perry	Wise
Chambers	Hazard	Peters	Wood
Chester	Hopkins	Prince	Woodward
Collitz	Howard	Ragozin, Mrs.	Wright, T. F.
Dahl	Hyvernath	Rogers	Yohannan
Deinard			

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The minutes of the last meeting, at Boston and Cambridge, were read by the Recording Secretary, Professor Lyon of Har-

vard University, and accepted by the Society. The report of the Committee of Arrangements was presented by Professor Jackson, of Columbia College. It was in the form of a printed program, with a cyclostyle supplement, and was accepted.

The reports of outgoing officers were now in order.

The Corresponding Secretary, Professor Lanman, of Harvard University, presented some of the correspondence of the year.

This included letters of regret from the Right Rev. C. R. Hale, of Cairo, Ill., from Prof. G. F. Moore, of Andover, Mr. Orne, of Cambridge, and Prof. Hilprecht, of Philadelphia. The last reports part 2 of volume I. of *The Babylonian Expedition of the University of Pennsylvania* as well under way, and that he hopes to have it in the printer's hands before leaving for Constantinople and the Hittite region in May, 1894.

The Secretary called the attention of the Society to the valuable and interesting volumes of transactions of the International Congress of Orientalists held in London in 1892. Application for them may be made to E. Delmar Morgan, Esq., care of the Royal Asiatic Society, 22 Albermarle st., London.

Messrs. Wijayaratna and Co. write from Maradana, Colombo, Ceylon, offering various works in Pāli, Sanskrit, and Singalese, and declaring their readiness to procure similar books for those concerned with these studies.

Dr. John C. Sundberg, recently appointed United States Consul at Bagdad, writes from Bagdad under date of April 27, 1893. He gives an interesting account of his journey from San Francisco to Bagdad, by way of Hong Kong, the Straits Settlements, Calcutta, Bombay, Bandar Abbas on the Strait of Hormuz, Bushire on the Persian Gulf, the Schatt-el-Arab, and the Tigris. He says: "Owing undoubtedly to the very filthy habits of the poor, there is a great amount of eye-disease here, and I treat from sixty to eighty patients (poor) gratis every day. I have also a few rich patients, and among them the Nakib, the most influential man in Bagdad, the Wali not excepted. I have made a few short excursions into the desert, but shall postpone my visit to Babylon, perhaps till next fall. There are sold here a great many antiquities of modern make; in fact, there are several Assyrian antiquity factories in Bagdad, and spurious seals and cylinders as well as coins are sold in the bazaars to gullible tourists."

Rev. George N. Thomssen, of the American Baptist Mission, Kurnool, Madras Presidency, India, writes under date of September 28, 1893, concerning the Vadagalai and Tengelai sects of Vaishnavas in that region:

"In India great religious revivals occasionally occur. At such times a wave of deepfelt enthusiasm sweeps over the land, and sometimes the effects of it can be traced after many centuries have elapsed. About 1000 years ago the great Vedanta philosopher and Brahman revivalist, Sankarāchārya lived. We have few facts of his life—all we know is that he lived as a celibate in Sringeri, Mysore. Among the Hindus, or rather among the Vaishnavites among the Hindus, he is

called the Adiguru, the first priest. His enthusiastic teaching of the Vedas with his own philosophical interpretation soon won for him disciples in all parts of India. Finding that he had not sufficient strength to look after all his adherents, he founded monasteries in convenient centers, and appointed his most prominent disciples to be his representatives. One of the centers selected was Ahobolam, in the mountains of the Kurnool District of the Madras Presidency, a place about 200 miles north-west of Madras. The madham or monastery is in the mountain-range known as the Eastern Ghauts. It is a lonely place, where tigers and the wild beasts of India have their haunts. There are two temples, one near the foot of the mountains, where the Pujari or worshiper (a man paid by grant of land and presents from pilgrims) lives ; and about 2 miles distant, in a very retired part, is the most sacred temple, in a cave.

"The god worshiped at Ahobolam is called Ugraha-Nara-Simham, the austere man-lion. Nara-simham is the name of the fourth avatar or incarnation of Vishnu. In this avatar Vishnu is said to have sprung out of a stone pillar as a man-lion, and to have in this shape destroyed the Asura or demon Hiranyan. When Vishnu is represented as the avenger, destroying the man-lion, he is called Ugraha, the austere, the awful one ; on the other hand, when he is represented as the pacified man-lion, quieted by the slokas chanted by Hiranyan's son Prachladen, he is called Lakshmi-Nara-Simham, the merciful man-lion. Before this severe idol the high-priest and the disciples of the Vadagalais are to worship, but at the present day the idol is very much neglected. It is questionable whether the present high-priest living in Tiruvellur near Madras has ever taken the trouble to go to Ahobolam, and hence many of his followers do not believe in him. He carries about with him a small gold idol representing Ugraha-Nara-Simham, and this his disciples worship. He is, like most of the other prominent priests of the Hindus, a wealthy man, and goes where he can get the most money with the least trouble—so a prominent Hindu says. Ahobolam is still considered a very holy place, and annually many pilgrims go there from all parts of India. The reason why this of all other centers is so sacred is that after the death of the Adiguru Sankarāchārya each one of his principal disciples, in their respective centers, claimed to be the holiest and that their monasteries or madhams were the most sacred, and so tried to gain the greatest possible influence. All the different centers in the course of time became Tengalai centers, except Ahobolam, which became the great Vadagalai center.

"Teng means south and Vada north, and Galai means mark ; hence the great difference between the two sects consists in the mark they wear on their forehead. These marks cause great dissensions at the great annual feasts, and even the courts are often called upon to settle the disputes. In the temples both sects claim the right of placing the mark of their sect on the forehead of the idol. The Tengalais claim that this mark represents both feet of Vishnu, resting on a lotus throne ; hence the mark, looking like a trident, is to extend down to the bridge of the nose. Some of the very orthodox Brahmans, in order to make

this very plain, even put five toes to each slanting line representing a foot. On the other hand, the Vadagalais claim that the mark represents only the right foot of Vishnu, from which the holy river, the Ganges, sprang; and hence there is to be no throne, or mark half way down the nose. The center line is said to represent Lakshmi, Vishnu's wife, since, according to the allegorical interpretation, as God has no wife, this represents the mercy of God which Lakshmi personifies. Formerly the great disputes were about more spiritual things, but, as both parties have become materialistic, their great disputes now are about these little caste-marks. Of course there are even now spiritually minded men in both sects, and these still keep up the quarrel about man's relation to God. Both parties have their own theories, which they defend with all the obstinacy of the proverbial Scotchman who is open to conviction, but who would like to see the man that could convince him.

"The question raised at these discussions is: 'Is a man a free agent or not?' To this the Tegalais reply: 'He is not! All of man's actions are controlled by God. Man has no will of his own, and can do nothing aside from God. He is as dependent on God as the kitten is on the cat!' Hence the theory of the Tegalais is called the Marjalapattu, or cat-hold theory. On the other hand, the Vadagalais say: 'Man is a free agent; he can do as he wills to do. He has a will of his own, and is not under the sole control of God. Man's relation to God is that of the young monkey to its mother!' For this reason this theory is called the Markattapattu or monkey-hold theory. Of course there are still many other differences, differences in ritual, in regard to priority at worship, in regard to mantras or sacred incantations; but these would be too wearisome to enumerate. The Tegalais are the most numerous among the Vaishnavites, and also seem to be the most materialistic, while the Vadagalais still seem to retain a trace in their character of the severity of the god they worship."

A letter from the Geographical Society of the Pacific invites us to take part in their "Geographical Day," May 4th. Mr. W. E. Coleman was subsequently appointed to represent the Oriental Society on that occasion.

Mr. Edward Naville writes inviting our Society to take part in the International Congress of Orientalists to be held at Geneva, Switzerland, September 3-12, 1894. Messrs. Brinton, Gottheil, Haupt, and Jackson were appointed Delegates to represent the Society.

The Secretary announced the death of the Corporate Member—Mr. Alexander Isaac Cotheal, of New York, N. Y.

Mr. Cotheal was born in New York City, November 5, 1804, the eldest son of Henry Cotheal, and grandson of Isaac Cotheal of Revolutionary times. At the age of twenty-one he entered the house of his father and uncle, Henry and David Cotheal, a well-known shipping-firm trading to Central America, especially the Mosquito Coast, to San Blas, and to California. In 1840, Mr. Cotheal was a frequent visitor to the ship

Sultanee, then in port at New York, and became greatly interested in the Arabic language. In 1851, he embarked for the east coast of Africa, Zanzibar and Mozambique. Later he visited Nicaragua; and he was Consul General for Nicaragua from 1871 until his death. He also traveled in Europe, particularly in Spain. It was of his personal experiences there that he liked especially to talk, and he seems to have had warm friends there.

He retired from business early in life and devoted himself to congenial literary pursuits. He was one of the founders of the American Geological Society and President of the American Ethnological Society. He filled various offices in the St. Nicholas Society, of which, at his death, he was the oldest member. He was a life-long member of Trinity Parish. He was the author of a "Sketch of the language of the Mosquito Indians," which was published in the "Transactions of the American Ethnological Society." Of Oriental tongues, besides Arabic, he studied Turkish, Persian, Hindustani, and Gujaratti.

His Arabic was chiefly learned at home, by hard study, and by constant teaching from natives whom he chanced to find in New York and who would come to his house and read with him. At the request of the late Sir Richard F. Burton, Mr. Cotheal translated the rare Arabic text of "Attappa, the Generous." This is published in the sixth volume of Sir Richard's "Supplemental Nights."

He was elected a member of the American Oriental Society September 30, 1846, and came to be the oldest living member of the Society. His presence was to be counted on at the New Haven and New York meetings, and he more than once entertained the Society at his residence. He was a Director of the Society for over a quarter of a century, from 1865 to 1891. In 1890, he made what was the first gift to it by way of endowment of a publication fund: to wit, one thousand dollars. This was reported in the Proceedings for May, 1890, as "intended by the donor as a nucleus of a Publication Fund, and prescribed by him to be invested, that its interest may be used to help in defraying the costs of the Journal and Proceedings."

Mr. Cotheal was unmarried. He passed away February 25, 1894, at his residence in New York. His nephew, Mr. Henry Cotheal Swords of New York, writes: "He died, as he had always lived, at peace with all the world; and I trust that our last end may be like his."

The Treasurer, Mr. Henry C. Warren, of Cambridge, Mass., presented to the Society his accounts and statement for the year April 6, 1893 to March 29, 1894, and suggested the desirability of annually appointing an Auditing Committee to examine the securities of the Society at the place where such securities may be stored. The Chair appointed gentlemen residing in the neighborhood of Boston: to wit, Professors Toy and Lyon of Cambridge. To them the Treasurer's accounts, with book and vouchers, and with report on the state of the funds, were referred. The Committee reported to the Society and certified that the accounts were in

due order and properly vouched, and that the funds called for by the balances were in the possession of the Treasurer. The usual analytical summary of the General Account follows :

RECEIPTS.

Balance from old account, April 6, 1893.....	\$1,045.96
Assessments (168) for 1893-4.....	\$840.00
Assessments (34) for other years.....	170.00
Sales of publications.....	114.26
Income of investments, so far as collected.....	36.46
Interest on balances of General Account.....	30.50
Supplement to anonymous gift of \$1,000.....	8.00
	<hr/>
Total collected income of the year.....	1,199.22
	<hr/>
Total receipts for the year.....	\$2,245.18

EXPENDITURES.

Journal, xv. 3, and distribution.....	\$212.52
Journal, xvi. 1 (part).....	154.12
Proceedings, April, 1893.....	138.49
Authors' extras from Journal and Proceedings.....	31.75
Paper.....	105.10
Job printing.....	21.00
Postage, express, etc.	33.69
	<hr/>
Total disbursements for the year.....	696.67
Credit balance on Gen'l Account, March 29, 1894.....	1,548.51
	<hr/>
	\$2,245.18

The supplementary gift of \$8 was intended to offset the excess over \$1,000 of the cost of the eight shares of bank-stock (at 126) in which the original gift was invested.

The interest of the Bradley Type-fund is regularly passed to the credit of that fund for further accumulation.

Exclusive of that interest, the amount of the interest, collected and uncollected, for the year is \$110.40, and belongs to the credit of the General Account.

The state of the funds is as follows :

1893, Jan. 1, Amount of the Bradley Type-fund	\$1,369.88
Interest for one year	55.32
	<hr/>
1894, Jan. 1, Amount of the Bradley Type-fund	\$1,425.20
Amount of Publication-fund	\$2,127.19
1894, March 29, Balance of General Account.....	\$1,548.51
	<hr/>
Total of funds in possession of the Society.....	\$5,100.90

The bills for Journal xvi. 1 have not yet been all presented.

The Librarian, Mr. Addison Van Name, of New Haven, presented the following report for the year 1893-94.

The additions to the Society's Library for the year now closing have been 90 volumes, 87 parts of volumes, 118 pamphlets, and a plaster cast of the Chaldean Deluge tablet. The number of titles is now 4,648.

No sales having been reported by the Paris agency* for ten years past, orders were sent for the return of the volumes of the *Journal* on hand, except vols. ii.-v., of which the Society already had a more than sufficient supply. In accordance with the instructions given, ten sets of these four volumes were distributed to certain designated libraries and institutions. From one of these, the *Musée Guimet*, we have just received an unexpectedly large return, no less than fifty volumes of its publications, including twenty-three quarto volumes of the *Annales* and twenty volumes of the *Revue de l'histoire des religions*. The Society will no doubt authorize the sending of the volumes of the *Journal* needed to complete the Museum's set.

The Imperial Russian Archæological Society has invited an exchange of publications by sending the latest volumes of three separate series of its issues, an invitation which should be promptly accepted.

The standing appropriation of \$25 a year for binding voted at the last meeting has not been expended. There will be a certain advantage if two years' appropriations may be combined so that \$50 may be available every second year.

During the past summer a much needed rearrangement of the Society's library was completed by Dr. Oertel, with the aid of Dr. Haskell, a service for which the thanks of the Society are due to them.

For the Committee of Publication, Professor Lanman reported as follows: The Proceedings of the Society at Boston and Cambridge, April 6-8, 1893, were issued, as a pamphlet of xlviii pages and as a part of volume xvi. of the *Journal*, on the 1st of June, 1893. The printing of the first half of volume xvi. of the *Journal* (260 pages) is so nearly completed that the part can be issued a few days after the meeting.

The Directors reported by their Scribe, Professor Lanman, as follows:

1. They had appointed the next meeting of the Society to be held at Philadelphia at some time during the Christmas week of 1894, in case the American Philological Association or any of the other Societies addressed by us upon the subject should finally determine to unite with us in a joint meeting at that time

* The stocks of publications of the Society long held by Messrs. Trübner and Co. of London, and by the firm F. A. Brockhaus of Leipzig, have now been returned; and likewise those held by Prof. Lanman. The Society has therefore now no scattered agencies whatever for the sale of its publications, and the entire stock thereof, along with its library, is gratuitously stored and cared for by the Yale University Library.

and place. The Committee on Joint Meeting was continued over. As eventual Committee of Arrangements had been appointed the Corresponding Secretary, and Professors Haupt, Hopkins, and M. Jastrow, Jr. [The next annual business meeting will be held in the week beginning with Easter (April 14), 1895.]

2. They had appointed, as Committee of Publication for 1894-95, Professors I. H. Hall, Haupt, Lanman, G. F. Moore, and W. D. Whitney.

3. They had appointed Mr. W. E. Coleman to represent the Society at the meeting of the Geographical Society, and Messrs. Brinton, Gottheil, Haupt, and Jackson as delegates to the Geneva Congress: all as noted above, page lii.

4. They had authorized the exchanges suggested in the Report of the Librarian, and the biennial combination of the annual appropriations for book-binding.

5. The Directors voted to recommend to the Society that an invitation be extended to the International Congress of Orientalists convening at Geneva in 1894, to meet in this country in 1897, under the auspices of the American Oriental Society. The Directors were careful to refrain from committing themselves to any question of details as to the place of meeting and the Committee of Arrangements; and not to commit the Society to the expenditure of money.

6. They had voted to recommend to the Society for election to membership the following persons:

As Corporate Members:

Mrs. Emma J. Arnold, Providence, R. I.;
 Rev. E. E. Atkinson, Belmont, Mass.;
 Hon. Truxton Beale, Washington, D. C.;
 Dr. William Sturgis Bigelow, Boston, Mass.;
 Prof. G. R. Carpenter, New York, N. Y.;
 Rev. Camden M. Cobern, Ann Arbor, Mich.;
 Mr. Ephraim Deinard, Kearny, N. J.;
 Mr. Joseph H. Durkee, New York, N. Y.;
 Prof. Ernest F. Fenollosa, Boston, Mass.;
 Miss Lucia G. Grieve, New York, N. Y.;
 Rev. J. B. Grossmann, Philadelphia, Pa.;
 Prof. Joshua A. Joffé, New York, N. Y.;
 Mr. Nobuta Kishimoto, Okayama, Japan;
 Mr. Robert Lilley, New York, N. Y.;
 Prof. Samuel A. Martin, Lincoln University, Pa.;
 Prof. Edward S. Morse, Salem, Mass.;
 Mr. George W. Osborn, Westfield, N. J.;
 Rev. Ismar J. Peritz, Mattapan, Mass.;
 Mr. Edward Robinson, Boston, Mass.;
 Mr. Sanford L. Rotter, New York, N. Y.;
 Miss Adelaide Rudolph, New York, N. Y.;

Mr. Macy M. Skinner, Cambridge, Mass. ;
Mr. A. W. Stratton, Toronto, Canada ;
Miss Cornelia Warren, Boston, Mass. ;
Rev. J. E. Werren, Abington, Mass. ;
Prof. John H. Wigmore, Evanston, Illinois ;
Rev. Stephen S. Wise, New York, N. Y. ;
Rev. A. Yohannan, New York, N. Y. [28.]

The recommendation contained in the fifth paragraph of the report of the Directors was unanimously adopted by the Society. And the persons recommended for election to membership, after ballot duly had, were formally elected.

On Saturday morning, Rev. Dr. Ward, and Professors Toy and Hopkins, as Committee on the Nomination of Officers, reported. The Corresponding Secretary, Professor Lanman, who was elected to that office first in 1884, and had performed the somewhat similar duties of Secretary of the American Philological Association from 1879 to 1884, having expressed a wish, after fifteen years of such service, to be relieved, the Committee nominated in his stead Professor Edward Delavan Perry of Columbia College, New York ; and, for the remaining offices, the incumbents of the foregoing year. The gentlemen so nominated were duly elected by the Society. For convenience of reference, the names of the Board for 1894-95 may here be given :

President—Pres. D. C. Gilman, of Baltimore.

Vice-Presidents—Dr. William Hayes Ward, of New York ; Prof. C. H. Toy, of Cambridge ; Prof. Isaac H. Hall, of New York.

Corresponding Secretary—Prof. E. D. Perry, of New York.

Recording Secretary—Prof. D. G. Lyon, of Cambridge.

Treasurer—Mr. Henry C. Warren, of Cambridge.

Librarian—Mr. Addison Van Name, of New Haven.

Directors—The officers above named : and Professors Bloomfield and Haupt, of Baltimore ; Mr. Talcott Williams, of Philadelphia ; Prof. E. W. Hopkins, of Bryn Mawr ; Prof. A. L. Frothingham, of Princeton ; Prof. R. Gottheil, of New York ; Prof. George F. Moore, of Andover.

In taking the Chair on Friday afternoon, the President of the Society made a brief address, in which he expressed his grateful appreciation of the honor that the Society had conferred upon him.

In assuming the office, in order to be quite familiar with the policy that had been pursued, he had made it his duty to read with attention the minutes of the Directors as well as of the Society, during the past half century ; and he spoke particularly of its new birth in 1857. At that time, the question had arisen as to the possible enlargement of resources and membership, and an elaborate report, drawn up by Professor Whitney and approved by an able committee, was presented and

adopted.* This report is still worth consideration. It lays stress upon the importance of publishing contributions to Oriental learning, as the chief condition of usefulness and honor. The long series of learned papers that bear the Society's imprint shows how steadily this principle has been observed. There are no indications that the standard will be lowered. On the contrary, the increasing number of scholars in this country devoted to Oriental learning gives assurance that the Journal and the Proceedings will continue to publish important contributions to Oriental science. Thus the highest object of the Society has been and will be attained.

In respect to the scope which should be given to Oriental studies, the report of the Committee makes these remarks, which, in view of the tendency of the Society toward philological studies, are worth repeating :

"We believe that Oriental studies have a high and positive value for all who are studying the history of the human race; that natural history, that geography, that ethnology, that linguistics, that the history of religions, of philosophy, of political institutions, of commerce cannot be pursued without the most constant reference to the Orient. * * *

"We need not fear * * * to welcome into our number any person who has enlightenment and culture enough to take an interest in our objects and to be willing to contribute to their furtherance. * * *

"We do not regard Oriental scholarship as a requisite for admission to the Society, but only that liberal culture which inspires an appreciation of our objects and a willingness to join heartily in promoting them. * * *

After other introductory words, the Chairman called attention to the fact that in a very few days, on the twelfth of April, it will be a hundred years since the birth of the distinguished geographer, Edward Robinson, who held the office of President of the American Oriental Society for a period of seventeen years, from 1846 to 1863. But few of the actual members of this association knew him personally. There are some, however, who remember how constantly he attended the meetings, which were then held semi-annually, as a general rule in Boston and New Haven; how dignified and courteous he was as a presiding officer; and how much lustre was derived from his acquisitions as a scholar and his fame as an explorer. The published memorials of his life are brief, consisting chiefly of the discourses delivered soon after his death by his colleagues in the Union Theological Seminary of New York, Professors Henry B. Smith and Roswell D. Hitchcock; but this brevity is not a reason for serious regrets, because his writings constitute his memoirs, and because the outward incidents of his career were not of extraordinary interest. He belongs to the class of men who confer great benefits upon their generation, and acquire corresponding renown, by accurate, patient, prolonged, and unostentatious researches, the results of which are important contributions to human knowledge. Although he was a minister of the Presbyterian church, it is not as a minister that he is remembered. He secured the reverence of his

* The Committee included Dr. Edward Robinson, President Woolsey, Professor C. C. Felton, Professor Hadley, and Professor Whitney.

pupils, but not so much by the inspiring qualities which were characteristic of his own biblical teacher, Moses Stuart of Andover, as by the thoroughness of his scholarship and the reputation of his works. As a grammarian and lexicographer he won distinction, especially in the early part of his career; but his lasting reputation is due to the thorough explorations which he made in the peninsula of Sinai, in the Desert, and in Palestine. Part of his fame may perhaps be attributed to the fact that in this modern epoch of scientific researches he was a pioneer in the field of Biblical geography; but far more depends upon his accuracy and thoroughness, as an observer, a recorder, and an interpreter. He would himself award the heartiest praise to his companion in travel, Rev. Eli Smith, whose name is associated with Robinson's upon the title page of the *Biblical Researches*. To his extraordinary preparations for the journey the most ample references are made, both in the preface and in the earliest chapter of the narrative, which is based upon the diaries of both the travelers.

In the archives of the American Board of Commissioners for Foreign Missions (the speaker continued) I have recently read the letters which were addressed by Eli Smith to Dr. Rufus Anderson, one of the Secretaries in Boston. I cannot say that they throw much light upon the well-known *Researches* in Palestine, but it is more than possible that they will interest those members of the Society who regard the journey of Robinson and Smith as an epoch-making expedition. Some extracts from this correspondence I therefore present to the Society, in commemoration of the life which began one hundred years since.

Here is added also the substance of President W. Hayes Ward's address at the meeting in Boston last year (April 7th, 1893: see the *Proceedings* of that meeting, p. vi).

A few gentlemen held an informal meeting, fifty years ago last August [1842], in the office of John Pickering, of Boston, to consider the practicability of organizing an American Oriental Society. They appointed a Committee to draft a constitution. They met again in the same place on the 7th of September, when the draft was reported, amended, and adopted. Again they adjourned till October 13th, when the organization was perfected by the election of John Pickering as President; William Jenks, Moses Stuart, and Edward Robinson as Vice-Presidents; William W. Greenough as Corresponding Secretary; Francis Gardner as Recording Secretary and Librarian; and John James Dixwell as Treasurer. The incorporators were John Pickering, William Jenks, and John J. Dixwell. The first Directors were Rufus Anderson, Barnas Sears, C. C. Felton, Sidney Willard, and Bela B. Edwards, and the object of the Society was stated to be the cultivation of learning in the Asiatic, African, and Polynesian languages.

I ask you now to stop for a moment and look at those names. You will notice, in the first place, that they do not represent particularly either Harvard College or Yale College. Professor Felton's name is a famous one in the history of Harvard, but he was a Grecian, and his

own studies were not especially in the line of those of the Society of which he was made one of the original Directors. Yale was not represented at all. It was inevitable that John Pickering should be elected first President of the American Oriental Society. It was to his initiative and that of Rev. Dr. Jenks* that its organization was due. He was for the first two or three years of its existence its life and soul. Mr. Pickering was—more, perhaps, than any other man we have ever had—our admirable Crichton, or Mezzofanti. He was, according to Charles Sumner, “familiar with the English, French, Portuguese, Italian, Spanish, German, Romaic, Greek, and Latin languages; less familiar, but acquainted, with Dutch, Swedish, Danish, and Hebrew; and he had explored, with various degrees of care, Arabic, Turkish, Syriac, Persian, Coptic, Sanskrit, Chinese, Cochin-Chinese, Russian, Egyptian hieroglyphics, Malay in several dialects, and particularly the Indian languages of America and the Polynesian islands.”

He was invited by Harvard College to the chair of Hebrew, and afterward of Greek, and declined both. He was pioneer in the study of the languages and antiquities of our American Indians. He wrote numerous books and papers, of which the one which will now be best remembered is his dictionary of the Greek language. Pickering's *Lexicon* succeeded Hedericus and Schrevelius in the use of our schools in the first half of the century, and did not lose its currency even down to the time when Liddell and Scott took and possessed the field. He was also a lawyer in full practice, City Solicitor for Boston, State Senator, and reviser and editor of the Statutes of Massachusetts. Such a man was a whole Oriental Society in himself, and his decease so soon after its organization seemed at first to be fatal to its survival.

The two oldest foreign Missionary Societies were very definitely represented in the two directors Rufus Anderson and Barnas Sears. It was more than anything else to provide a place where the grammatical, geographical, and historical studies of missionaries could be received and published, that the American Oriental Society was founded.

Rufus Anderson was the most distinguished director of missionary work that this country has ever seen. He was a tall, smooth-shaven, very dignified and very positive man, and made one great mistake in the conduct of the mission work under his charge. He undervalued the direct and indirect work of education, and to this day the injury is felt which resulted from his suppressing certain advanced schools after his visit to India. While he was not a contributor himself of articles to be read at the meetings of the Society, his hearty coöperation was of great value, as encouraging the missionaries under his care to prepare and send valuable contributions.

Barnas Sears, Professor in Newton Theological Seminary, was closely related to the second foreign Missionary Society organized in this country, and which found its field in what was then the almost utterly unknown land of Burmah. But to the public Barnas Sears was known as

* See Proceedings for May, 1875, p. iii (Journal, vol. x., p. cix).

one of the very foremost representatives of education in this country, not simply as connected with seminary or college, but by his activity in all matters which concerned public education. He was no more of an Orientalist than Dr. Rufus Anderson, but his sympathy was genuine and his help hearty.

An entirely different class of men was represented by Moses Stuart, Edward Robinson, and Bela B. Edwards. These men were scholars such as we cannot easily equal, the men who first introduced our youth to German learning. Moses Stuart was the pioneer of Hebrew studies in America, Professor of Hebrew at Andover Seminary, a man of free, open, and honest mind, thoroughly devoted to the truth, the author of excellent Hebrew grammars and Chrestomathies, and of numerous able commentaries and learned discussions and excursions. If any man in this country was the morning star of Oriental learning, it was Moses Stuart, a man far in advance of his day. I never saw him, although I learned as a boy to believe him the chief of American scholars, and I went to Andover Academy in time to hear, ten years after the organization of the Society, the commemorative funeral discourse preached at the opening of the term following his death. As might be expected, he was a theologian as well as an Orientalist; but his singularly candid mind always put him in advance of the conservatives of his day, although I remember that it did not prevent him from defending the paternal institution of African slavery against the intemperate attacks of the troublesome Abolitionists.

Edward Robinson was a younger man, who lived for a while in Professor Stuart's family, and was induced by him to devote himself to Oriental studies. He was then in the prime of his power, and had the year before published his famous "Biblical Researches" in Germany and the United States. His edition of Gesenius' Hebrew Lexicon had not yet appeared, nor his Hebrew grammar. The young Hebrew students of the day still used Stuart's Grammar and Chrestomathy, and Gibbs's Lexicon. I well remember Edward Robinson, and indeed I recited to him a few times while he was still teaching in Union Theological Seminary, but in feeble health, in 1857. He was a bluff, somewhat gruff man, strongbodied and large, with a kind heart under a rough exterior. I recall a recitation in the Harmony of the Gospels—for at this time he had ceased to teach the Old Testament—in which, when he had mentioned Good Friday, one of the junior theological students from Puritan New England asked him in perfect innocence, and with an ignorance that did not all surprise me, "What part of the year does Good Friday come on?" "Are you," was his severe reply, "from Connecticut, and don't you know that Fast Day always comes on Good Friday?" We all of us knew the annual Fast Day, if we did not know Good Friday. Moses Stuart and Edward Robinson were the fathers of a real school of Hebrew students, and he created an enthusiasm in Semitic studies which might have borne much more fruit if the time had been ripe for it, as it was ripe when men of our own day created a new interest in the same studies. But then little advance seemed possible. There was no key to the Semitic problems. Scholars seemed able to

go only round and round in the same circle, and so enthusiasm was soon dampened. Besides, the key to Aryan languages was then found in the new study of Sanskrit, which attracted all the attention of our ambitious young men. And yet Moses Stuart and Edward Robinson were pioneers to whom we cannot give too much credit. Even the best methods of modern teaching were not unfamiliar to them. The Seminary method, of which we make so much, was familiar to them, if I may judge from a single specimen of their labors which I found a day or two ago in looking over some pamphlets belonging to my father, who was one of Moses Stuart's pupils, and a member of the class which prepared this pamphlet. It is a collection of all the quotations in the New Testament, arranged in parallel columns, giving the Hebrew and Septuagint forms from the Old Testament, with the quotations as they stand in the New Testament, and prepared by the junior class of Andover Theological Seminary, under the superintendence of Moses Stuart, and published in 1827. The texts of both Greek and Hebrew are the latest and best available, the Septuagint being taken from that of the Vatican manuscript.

Bela B. Edwards, another of Moses Stuart's pupils, was a yet younger man, and a very brilliant scholar ; but he died at an earlier age. I will not stop to recount his career and character, but I have mentioned these men as the typical Oriental scholars of their time. All that the schools of the day could do for Oriental studies was to teach Hebrew to theological students, with a little Syriac to those who wanted it.

It is at first surprising that, with so many theological seminaries, every one of which had a professor of Hebrew, there was so little done worth recording. It was only a very few enterprising men like Moses Stuart and Edward Robinson that attempted anything new and creditable ; the rest simply taught the dry rules of grammar, as the grammar gave it, to their pupils. There was not a professor of any Semitic language in any of our colleges or universities, with the sole remarkable exception, soon to be mentioned, of Edward E. Salisbury in Yale College. Indeed, there was no professor of Arabic in Harvard, our oldest University, until, not many years ago, our own Professor Toy was called to the chair of Semitics. The reason is clear—the time was not ripe for any unifying principles which should give basis for comparative study. Among the Aryan languages, Comparative Grammar was in its infancy ; and outside of that family, where the key had been found in Sanskrit, it was unknown.

I have said that the organization of the American Oriental Society was perfected at the October meeting in 1842 by the election of the first board of officers. At the next May meeting, in 1843, the President read an admirable introductory address, in which he outlined the purposes of the Society and the advantages which it possessed, and then gave a general view of the progress of Oriental studies up to that time. One who now observes that our country is full of young and ambitious scholars devoted to these studies in our institutions of learning will be surprised to see that it was not to such men that our first President looked for the learned papers which should justify the existence of the

Society, but chiefly to the missionaries in foreign lands. It was they only, or travelers like Edward Robinson, that seemed to have any opportunity to make original researches. We must look, he said, to the "intelligent and energetic American missionaries and scholars who are now spread over some of the most interesting regions of the civilized East and of uncivilized Polynesia." There are, he added, "more American missionaries masters of these languages than of any other nation on the globe." On these men he depended; but he pointed with special pride to the monumental work of Edward Robinson, issued the year before. Then he cast his eye over the entire globe, but stopped a moment in Egypt, where, he said, it is now proved that history goes back as far as the nineteenth century before Christ, in Carthage, Phenicia, Asia Minor, in the Nestorian country of Persia, where Justin Perkins had honorable mention, and in Mesopotamia, whose records were yet unexcavated.

It is interesting, now that Cuneiform literature holds so prominent a place in our studies, to hear President Pickering speak thus of the few cuneiform inscriptions then known, mostly from Persia: "The eminent Dr. Grotefend, of Frankfort, has recently applied himself to the task of deciphering them, and his success thus far does the greatest credit to his learning and sagacity." Only the Persepolitan was known, and the angular style of the writing shows, said he, that the cuneiform characters were used "exclusively for the purpose of engraving on stone, and were never intended for the ordinary purposes of writing." It is evident that libraries of cuneiform writing to be unburied in every ancient city were then unimagined. Not yet were the names of Rawlinson, Oppert, Hincks, and Norris known to the world.

After going the circuit of the East and of Polynesia, attracted to the latter region by the labors of the missionaries in the Sandwich Islands, President Pickering makes one observation which was a prophecy, and which anticipated what proved to be almost a complete revolution in the work of the Society and in the linguistic scholarship of the country. These words deserve to be quoted. He says (JAOS. i. 42):

"It is a high gratification to every American, who values the reputation of his native land, to know, that some of our young countrymen are now residing in Germany—that genial soil of profound learning—with a view to the acquisition of the Sanscrit language; and that we shall one day have the fruits of their learning among us."

To this was appended the following note:

"Since this Address was delivered, one of our countrymen has returned from Germany, with a rich collection of Oriental manuscripts (formerly in De Sacy's library), and a valuable body of works in Sanscrit literature; which, it is said, are to accompany him to the ancient and respectable College at New Haven."

That young man was Edward E. Salisbury, who had gone to Yale College to take the chair of the Sanskrit and Arabic languages, and also was destined to become very soon after this the Corresponding Secretary, and to take on his willing and capable shoulders the burden of the Society, to prepare or secure its papers, and to pay the expense of their

publication. That chief burden he bore until, in 1857, he succeeded in shifting the responsibility of the office upon William D. Whitney, the most distinguished scholar among all the names on our records.

Such was the origin of the American Oriental Society in 1842, just twenty years after the organization of the Asiatic Society of France, and nineteen years after the organization of the Royal Asiatic Society of England. The German Oriental Society, it may surprise us to recall, was organized in Dresden in 1844, two years after the American Oriental Society, and the first number of its *Zeitschrift*, issued in 1846, has an article on Oriental studies in America, prepared, I think, by Bela B. Edwards, in which a very handsome tribute is paid to the excellent work of Edward Robinson, Eli Smith, and others, and mention is made of the publications of this Society and of the excellent introductory address of Mr. Pickering, whose death is lamented, as he was the life of the Society, and it had seemed to be in a state of suspended animation since his decease.

The first article in the first issue of the *Journal of the American Oriental Society*, following the President's address, is on Buddhism, and is by Edward E. Salisbury. Every other article in this volume—and the same is very nearly true of the second—is by some American missionary. One of these, on the Zulu language, is by Lewis Grout, and it is a remarkable fact that he offers an article for this meeting on a kindred topic. In vol. iv. there are twelve articles, ten by missionaries, one by Edward E. Salisbury, and one by William D. Whitney. Professor Whitney's first contribution to our *Journal* is in the Second Part of vol. iii. and is on "the Main Results of the Later Vedic Researches in Germany."

Such was, in brief, the condition of Oriental studies in the United States during the first four years after the organization of the American Oriental Society. Then followed immediately what we may call our Sanskrit era. From this time the two men who carried the Oriental Society on their shoulders, and who gave it its fame and glory, were Edward E. Salisbury, the elder scholar, and his distinguished pupil, William D. Whitney. Philology had found its key. The great school of American philologists found their teacher and master at "the ancient and respectable College at New Haven." The generous expenditure of time, labor, and money by these two men in behalf of this Society is beyond all praise.

During the session of Saturday morning, a telegram was received from Professor Theodore F. Wright, who had meantime returned to Cambridge, to the effect that permission had been granted by Government to the authorities of the Palestine Exploration Fund to conduct excavations for two years in Jerusalem.

Mr. Talcott Williams, a member of the Executive Committee on the Babylonian Section of the Archæological Association of the University of Pennsylvania, announced that explorations had been resumed at Niffer by Mr. John Henry Haynes, who had prosecuted the work with great success during the past year, and would be kept in the field for a year to come.

Rev. Dr. Ward presented the following minute, and added some fitting words showing how great have been the services of Professor Salisbury to the Society. By vote of the Society, the minute was adopted for record and for transmission to Professor Salisbury.

The American Oriental Society, at its annual meeting in New York, this the thirtieth day of March, 1894, remembering with gratitude the eminent services rendered for many years to it, and through it to American scholarship, by its oldest living member and most efficient founder, Edward Elbridge Salisbury of New Haven, Connecticut, desires heartily to congratulate him on occasion of his eightieth birthday, now almost attained, and to express its fervent wish that he may long continue to encourage and aid it with his interest and his counsels.

In the program for the meeting, the Corresponding Secretary had ventured to insert the following paragraph :

The plan of the sessions allows about nine hours for the presentation of communications. It is evident that, in fairness to all, no one speaker has a right to more than fifteen minutes for the presentation of any one single communication. It is, moreover, palpably inappropriate to read a long or a highly technical paper before persons of so varied interests as are they who now compose the Society. It is therefore suggested that in case of such papers no attempt be made to read the manuscript; but that a résumé of the paper be given, along with a brief account of the methods employed in reaching the conclusions. It is believed that the results of an enforcement of such a rule on the part of the presiding officer would commend the rule to the hearty approval of the Society.

The suggestion was in fact adopted as a rule, and was enforced with all desirable strictness by the Chair, and with excellent effect. If a continuance of this rule should also prove effectual, for a time at least, in staying off what is proposed as an otherwise inevitable division of the Society into Aryan and Semitic sections for the reading of papers, no one can doubt that we should all be the gainers.

The suggestion was made that all papers be handed in some weeks prior to the meeting and distributed in print to the members before they leave their homes, so that the time now devoted to reading might be free for discussion; but such a course would appear for the present hardly feasible.

The Society held four formal sessions, all in the Room of the Trustees of Columbia College. The afternoon sessions of Thursday and Friday began at about three o'clock; and the morning sessions of Friday and Saturday, at about half-past nine. To break the continuity of the sessions, several recesses of five minutes were taken. Between the morning and afternoon sessions of Friday, certain New York members entertained the

Society at luncheon at No. 54 East Forty-ninth Street, opposite the College. On Friday evening, at about seven o'clock, some thirty-five members dined together at Hotel Wellington. Both on Thursday evening, and also on Friday evening after the dinner, a very considerable number of the members met informally in a pleasant hall, and spent several hours in agreeable social intercourse.

It was voted that the thanks of the Society be sent to the authorities of Columbia College for their hospitality, and to the Committee of Arrangements for their work, which accomplished much for the comfort and pleasure of the members and for the success of the meeting.

Final adjournment was had on Saturday at 12.35 P. M.

The following communications were presented :

1. Report of progress of work upon Buddhaghosa's *Visuddhi-Magga* ; by Henry C. Warren, of Cambridge, Mass.

Several years ago I began to make translations from the Buddhist Scriptures as contained in the Pāli language. My plan was by a series of translations to present Buddhist doctrine in Buddhist phraseology, so to speak. The work has proved very pleasant. The thoughts, the dialectic, the point of view, the whole mental and moral atmosphere in which one is immersed, in the study of native Buddhist texts, are each and all so different from anything to which we Occidentals are accustomed, and so much that seemed important truth rewarded my search, that, though the work has grown but slowly, my interest has never flagged.

In order the better to carry out my plan of giving a consistent view of Buddhist teaching, it was necessary to consult and, if possible, master Buddhaghosa's *Visuddhi-Magga*. Buddhaghosa was a Buddhist convert who flourished in the fourth century of our era. He wrote in Pāli, and his masterpiece is, no doubt, this same *Visuddhi-Magga*, which, being interpreted, is 'The Way of Purity,' or 'The Way of Salvation.' This *Visuddhi-Magga* is a treasure-house of Buddhist doctrine, and elaborates in an orderly, systematic manner the Buddhist plan of salvation.

As the *Visuddhi-Magga*, however, is only to be had in native manuscript, I had recourse to one owned by Prof. T. W. Rhys Davids, Secretary of the Royal Asiatic Society, and began to transcribe. It seems almost impossible to understand a Pāli work written on palm-leaves until it has first been transcribed. The natives do not divide the words, and they make use of almost no devices to help the eye, so that it becomes a question of spelling one's way along letter by letter, and it is hardly possible to read currently. Accordingly I was obliged to copy, and to copy not once but a number of times, and thus I found myself editing the *Visuddhi*. In order to better the readings of the passages I wanted to translate, I obtained from Rev. Richard Morris, of England, another palm-leaf manuscript, written like the first one, in the Singhalese character. As these two manuscripts, however,

were very similar, and repeated each other's mistakes, and as I now felt myself fairly embarked on the task of editing the *Visuddhi*, I borrowed the copy belonging to the India Office Library of London, England. This is a very correct manuscript in large Burmese characters, and on it I rely as much as on both the others put together. Lastly, a fourth manuscript has just been received, written like the India Office Library copy in the Burmese character, and, so far as I have yet had opportunity to judge, with very similar readings.

Thus the volume of translations and the editing of the *Visuddhi* have gone on hand in hand; but the volume of translations, as having been first undertaken, I am intending to publish first. In fact, the first chapter is being printed, and the electroplates made; but the next three chapters occasion me more difficulty, and are still in a backward condition. As they are largely of a philosophical character, and contain with the fifth and last chapter what will make some seventy-five printed pages of translations from the *Visuddhi*; and as, moreover, there is much of a technical nature in the *Visuddhi* which must be mastered in order to understand the thought, my progress in my volume of translations is conditioned by my comprehension of the *Visuddhi*; and, *per contra*, in order to edit properly I must understand what I am editing, and to that end translation is greatly helpful. Thus I do not find it advantageous to let one undertaking far outrun the other, and hence also it seems impossible at present to fix the date when either one will be finished. However, two complete type-written copies of the *Visuddhi* have been made, and about a third of another one. My design is to have this third copy be the last, for there would appear to be no need of a fourth complete revision. Therefore I am in hopes that, when this third copy is finished and the various readings have been affixed, it will be fit to send to the printers.

2. On the Sacrifices כלל and שלם כלל in the Marseilles Inscription; by Professor George A. Barton, of Bryn Mawr College, Bryn Mawr, Pa.

It will be remembered that in the Marseilles inscription mention is made of three different kinds of sacrifices, which are respectively called כלל, צועת, and שלם כלל. Of these, the צועת is sufficiently explained in the *Corpus Inscriptionum Semiticarum*. The exact meaning of the other two is, however, much debated.

As to כלל, Vogüé and Blau think this word an adjective descriptive of the אלף, corresponding to the Hebrew תמים. The following uses of the word in Hebrew may be urged in support of this opinion: יָפִיךָ בִּי כָּלִיל 'thy beauty for it was perfect,' Eze. xvi. 14; כָּלִילֶת 'perfect in beauty,' Eze. xxvii. 3. This view is, however, shown to be incorrect by the inscription itself; for we have in l. 3. בַּכֶּלֶל, in the case of a כלל, where כלל is evidently the name of a sacrifice. Saulcy, Munk, Schröder, Meier, Halévy, and the editors of the *Corpus* are therefore in the right when they maintain that there are three sac-

rifices, and not two only, mentioned here. The *Corpus* translates כלל 'holocaust,' and in this follows the Hebrew usage. Cf. Lev. vi. 15, לַיהוָה כָּלִיל תִּקְטָר 'it shall be to Yahwe a holocaust, burned as incense;' Lev. vi. 16, וְכָל־מִנְחַת כֹּהֵן כָּלִיל תְּהִיָּה לֹא תֹאכַל 'every *minkhath* of the priest shall be a holocaust; it shall not be eaten;' Deut. xiii. 17, וְאֶת־כָּל־שִׁלְלָהּ תִּקְבֹּץ אֶל־תּוֹךְ רַחֲבָהּ 'and its spoil thou shalt gather together unto the midst of the street, and thou shalt burn the city with fire; it is a holocaust to Yahwe;' 1 Sam. vii. 9, וַיִּקַּח שְׁמוּאֵל טֶלֶה חֹלֵב אֶחָד וַיַּעֲלֶה עֹלָה כָּלִיל לַיהוָה 'and Samuel took a fat lamb, and offered it as a burnt offering, a holocaust to Yahwe.'

From these examples it is clear that כלל means 'holocaust' in Hebrew, and there are no Hebrew examples to be adduced on the other side. It does not, however, follow from this that it had the same meaning in Phœnician. Indeed, our present inscription abundantly proves that it did not have that meaning. It prescribes that in the case of an ox as a כלל the priest should have three hundred shekels of flesh,* and that in the case of a calf as a כלל he should have one hundred and fifty shekels of flesh. Whence was the flesh to come, if not from the victim? Moreover, the hide, the viscera, the feet, and the rest of the flesh went to the owner of the sacrifice. Whether the owner offered all this as a burnt offering, or retained a portion for himself, does not appear. It may be supposed that he offered it, but this cannot be proved. When the victims were smaller animals, as rams, lambs, kids, and birds, the priest received a money-payment only. Were these then real holocausts? It is uncertain; for in some cases, as when the victim was a lamb or a kid, the hide etc. went to the worshiper.

When the victim was an ox or a calf, therefore, we are sure that the offering was not a holocaust; and we cannot be sure that it was so in all the other cases.

It appears, therefore, that the כלל did not signify a holocaust, but was a technical name for a sacrifice the exact nature of which is not yet known.

Is the nature of the שלם כלל clear? In this phrase the שלם appears to have been the name of the sacrifice, and the כלל an adjective describing it. If so, the adjective meant 'complete' or 'whole,' if we may reason from Hebrew analogy.

The root-meaning of שלם was 'be whole.' If etymology were, therefore, to have any weight, we should conclude that this sacrifice was designed to renew the bond of union between the worshiper and

* It is true that this statement rests on an emended passage of the text, but of the correctness of the emendation there can be no doubt. The reasons for it are patent to all, and in it all agree.

his god. Among the Hebrews the etymological meaning is supported by several statements of the literature. For example, Deut. xxvii. 7, וְזָבַחְתָּ שְׁלָמִים וְאָכַלְתָּ שֶׁם וְשִׂמַּחְתָּ לִפְנֵי יְהוָה אֱלֹהֶיךָ 'sacrifice שְׁלָמִים, and eat there, and rejoice before Yahwe thy God.' Here שְׁלָמִים is a survival of the old commensal idea of sacrifice. Lev. xix. 5 reads וְכִי תִזְבְּחוּ זֶבַח שְׁלָמִים לַיהוָה לְרֹצְנָכֶם תִּזְבְּחוּ 'when ye offer sacrifices of שְׁלָמִים to Yahwe, ye shall offer them that ye may be accepted.' From Lev. iii. 3, vii. 31, etc., we learn that the fat of the שֶׁם was burned on the altar, and the inwards without the camp, and that the flesh was eaten. Lev. vii. 11-21 divides the שְׁלָמִים into thank-offerings and vow-offerings: cf. Prov. vii. 14. Whether a similar ritual existed, and similar distinctions held, in Phœnicia, we have no means of knowing. The analogy of כָּלֵל as a sacrifice would lead us to think not. The term שֶׁם has disappeared from the Carthage tablet. We have also no means of determining the exact force of כָּלֵל in the compound expression. It may have applied either to the victim, implying that the whole was a שֶׁם, or to the idea of the root שָׁלַם, implying that it effected a complete wholeness between the god and the worshiper. The former supposition is more in accordance with the analogies of primitive thought, and is to be preferred.

3. Description of the Semitic manuscripts in the library of the Hartford Theological Seminary; by Professor Duncan B. Macdonald, of Hartford, Conn.

I. SYRIAC.

Four fragments of lectionaries (P'shitā and Harqlensian text), all in very similar hands, closely resembling Plate VII. in the facsimiles given in Wright's *Cat. of the Syr. Mss. in the Brit. Mus.*, but more regular and angular. They resemble, also, but by no means so closely, Plate XIV., being much finer in outline and not so clumsy.

A. A double leaf of vellum, not the inner leaf of a gathering; double cols.; 43 × 31,* written part 26 × 20, between cols. 2.5; a full line averages 11 letters; single point punctuation and colored ornaments; Harq. text.

F. 1a.—John xv. 26-xvi. 3; then ܐܡܝܢ ܕܡܝܬܐ ܕܡܝܬܐ (colored ornament across page) ܐܡܝܢ ܕܡܝܬܐ ܕܡܝܬܐ.

b.—Colored ornament across page, then ܐܡܝܢ ܕܡܝܬܐ ܕܡܝܬܐ ܐܡܝܢ ܕܡܝܬܐ ܕܡܝܬܐ.

F. 2a.—ܐܡܝܢ ܕܡܝܬܐ ܕܡܝܬܐ ܐܡܝܢ ܕܡܝܬܐ ܕܡܝܬܐ; Luke v. 17-20.

b.—Luke v. 20-25.

B. A fragment cut out apparently for the sake of a painting of Christ raising the dead, which fills one side. On the other, in double cols., Luke xxiv. 4-6, 9-10. Breadth of written portion 21, between cols. 2.5;

* All measurements are given in centimetres.


a full line averages 11 letters; single point punctuation; small ornaments between verses 4 and 5, 9 and 10. Harq. text.







C. A single vellum leaf, much shriveled and damaged by fire ; double cols.; written portion 28 x 19, between cols. 1; a full line averages 11 letters; single point punctuation; rubrics in red and gold; P'shītā text.

a.—John xii. 12-17. [١٢-١٧]

b.—John xii. 17-22; at foot of col. 2 a rubric of 8 lines, but much damaged.

D. A single vellum leaf; double cols.; 43×32 , written portion 30×21 , between cols. 2.5; a full line averages 10 letters; single point punctuation; rubrics and colored ornaments: Harq. text.

a.—[?]  . Luke xiii. 22-28.



b.—Luke xiii. 28-30; then, in a small hand,  |  (along margin ). Then, in a larger hand,  |  |  then, at head of col. 2, John iv. 46-50.

Marginal readings: in Luke xiii. 25, ܠܥܠܡܝܢ for ܠܥܠܡܝܢ ; in John iv. 47, ܠܥܠܡܝܢ for ܠܥܠܡܝܢ .

[It may, perhaps, serve as an explanation of so elaborate a description of such small fragments, that they are to be regarded as specimens from an as yet untouched collection in Kurdistān. So far as the evidence goes, we may have here a new find of 8th Century MSS.; and, as efforts are being made to get at them, further information may be looked for.]

II. ARABIC.

1. Kūfī Qur'ān fragment.

One very large oblong vellum leaf, written on both sides but mounted in such a manner that only the writing on one side is accessible; size of leaf as it remains, 54.5 × 49, of written part 48 × 45.5; 25 lines; a rounded regular hand, sloped slightly backwards, and with much closer resemblances to Plate LIX. in the Palæographical Society's Facsimiles (dated by Wright in the 8th century) than to any other Kūfī text I have seen; but it is firmer and more rounded, and the slope backwards is not so marked; it is absolutely different from the usual stiff artificial Kūfī; words divided between lines; at the end of line 13 there is a little stroke to fill out the line, thus— , and the rest of the word, , comes in the next line; no vowels; diacritical points sparingly given, in the shape of short slanting lines; and divisions of verses are similarly marked (except end of verse 95, where there is no mark); but all these are apparently later additions, for the ink is much blacker and fresher; terminal ornament to l. 14 (end of v. 92)—this certainly by original hand, and just before it stand three slanting lines belonging to

the later verse divisions ; the page that is accessible contains Sūra xi., v. 86, [وَلَا تَبْخَسُوا النَّاسَ] , to v. 98, بعدا لمدين ; there is no ruling visible.

There are the following differences of orthography from the Qur'ān text as given in Flügel and in Fleischer's *Baiḍāwī* (compare generally Nöldeke, *Geschichte des Qorāns*, pp. 248 ff.): The alif of prolongation is omitted in ^أأَمْوَالِنَا 1. 5, ^أأَخَالِفُكُمْ 1. 8, ^أالْأَصْلَاحَ 1. 9, ^أصَالِحٍ 1. 12,

^أجَائِظِينَ 1. 25, and in all the cases of the vocative يَا, viz. ll. 3, 6, 10, 15, 17, 19 ; the alif with

hamza is omitted in ^أأَرَأَيْتُمْ 1. 6 (Nöld., p. 254); in 1. 8 ^أأَنْهَيْكُمْ and in 1. 16

^ألَنْزَاكَ are written for ^أأَنْهَأُكُمْ and ^ألَنْزَاكَ ; in 1. 5 ^أتَشَا (accepting the later diacritical points) is read for ^أنَشَاءَ in Baiḍāwī's text, but he

gives ^أتَشَاءَ as a various reading (compare also Nöld., p. 258); but in the text given with the Calcutta edition of az-Zamakhsharī's *Kashshāf*

several of these words are written as in this fragment—^أأَنْهَيْكُمْ ,

^أأَرْءَيْتُمْ , ^ألَرْجَمُكَ , ^أجَتِيبِينَ , ^أصَلِحِ , ^أنَشَا , ^ألَنْزِيكَ and ي in all the

cases of the vocative ; in the Qur'ān lithographed by Drugulin in 1890 from a MS. of A. H. 1094 I find the first three of these, and the first two are in the Qur'ān MS. of A. H. 978 in the Seminary library. I give these details as an addition to the growing proof of our need of a reliable Qur'ān text. No one could describe Flügel's edition as reliable, and Fleischer edited Baiḍāwī, not the Qur'ān. The following extracts from

p. 167 of the ^أغِيثُ النِّفْعِ فِي الْقُرْآنَاتِ السَّبْعِ لِسَيِّدِي عَلِيِّ النَّوَرِيِّ (on the margin of Ibn al-Qāṣiḥ's Commentary on the *Shāṭibiya*, Cairo, A. H. 1304) may be of interest as to two of the above readings : (نشاوا انك) قرأ الحرمين وبصرى بابدال الثانية وأوا

وعنهم أيضا تسهيلها بين بين والباطون بالتحقيق . On p. 18 in the ^أومراتبهم في المد لا تخفى ورسم نشاوا هنا بالواو وأعنى بالحرميين إمامي طيبة : مُصْطَلَحُ الْكِتَابِ he explains :

ومكة أبا رؤيم نافعا وأبا معبد عبد الله بن كثير *

(أَرَأَيْتُمْ) قَرَأَ نَافِعَ بِتَسْهِيلِ الْهَمْزَةِ الثَّانِيَةِ وَعَنْ وَرَشٍ أَيْضًا
إِبْدَالِهَا أَلْغَا فِيمَدَّهَا طَوِيلًا وَعَلَى بِاسْقَاطِهَا وَالْبَاقُونَ
بِتَقْطِيقِهَا *

2. Qur'ān of A. H. 978.

Carefully written on Oriental glazed paper; fully pointed and, generally, with the *waqf* signs (Kosegarten, *Gramm. arab.*, p. 88; *Dictionary of the technical terms used in the sciences of the Musalmans*, pp. 1498-1500; as-Suyūṭī, *Itqān*, Calc. edit., pp. 195 ff.; Cairo edit. of A. H. 1306, pp. 87 ff.; Nöld., *Gesch.*, pp. 352 ff.). Consists at present of 329 leaves, but one is missing between F. 326 and F. 327 (contained Sūras xciii.—xcvi.); gatherings @ 5, but so many leaves have been mounted that the later gatherings cannot be distinguished; size of page, 20.5 × 15; of written parts, 13.5 × 7.5; 13 ll. to the page; catchwords to leaves; no ruling visible; Sūra titles, sections, and pausal signs in red; has been carefully collated, with corrections on margin; on b of last leaf came last words of سورة الناس, and an Arabic-Turkish

colophon: مِنَ الْجَنَّةِ وَالنَّاسِ ۝ تَمَّتْ تَمَام (sic) بِعَوْنِ اللَّهِ

الملك المَنَّان كتبهُ افقر الفقراء وخادم الصلحا المحتاج
الى رحمة الله تعالى اضعف العبد [sic] الفقير ابراهيم سردر
بان استأنف بابهمايون بدر السلطنة جرى ذلك وحرر في
اوايل ربيع الاول من شهور سنة ثمان سبعين وتسع مائة

Stamped oriental leather binding; bookplate with D. G. IOHANNES WILHELMUS D. S. I. C. M. A. & W. | EX BIBLIOTHECA SERENISSIMÆ DOMUS | SAXO-ISENACENSIS.

3. Al-Ghazzālī ('Abū Hāmid Muḥammad b. M. b. M.) ash-Shāfi'ī—*Minhāj al-'Abidīn*, and three books of the *'Iḥyā al-'Ulūm*. A. H. 850.

Written in a legible hand on Oriental glazed paper, without vowels, but with many diacritical points; rulings with dry point (the مَسْطَرَّة?),

as also slanting on the margin for notes; many marginal notes and corrections; catchwords to leaves; section-titles and divisions in red; 174 leaves; 17 gatherings @ 5 + 1 @ 2(?); the second leaves of the first and last gatherings are lost; leaves 1a and b, 109b, and 173-4a and b are blank; 27 ll. to page; size of page 27 × 18, of written part 17 × 12.

Contains, on leaves 3-109, §§ 37-40 of أحياء علوم الدين, being the last sections of the 4th (ربع المنجيات) and last quarter of the work: compare Gosche, pp. 254 ff. The titles of the sections are:

كتاب التفكير (39); كتاب المحاسبة والمراعاة (38); كتاب النية (37);
 they correspond to Vol. iv., pp. 327—end of Cairo ('Azharīya) edit. of A. H. 1302; the beginning of § 37
 is missing down to **يُنَادِي الْمَلَائِكَةَ**, p. 327, l. 26 of above
 edit.; on leaves 110–171 is **كتاب منهاج العابدين**, complete down
 to **وإن يعضه**, p. 89, l. 30 of Cairo (Maimuniya) edit. of A. H.
 1305; the closing four lines and the colophon were on the lost leaf, 172;
 on leaf 109a is colophon to the *'Ihyā al-'Ulūm* (in this and in other
 notes I supply diacritical points, which are mostly lacking):

فرغ من تعليقه الفقير الى رحمة ربه محمد ابن [sic] ابي بكر
 ابن الحروري [?] الشافعي عفا الله عنهم اجمعين وذلك في يوم
 الاثنين الحادي والعشرين من شهر شوال سنة خمسين
 وثمانى مائة *

On the margin there comes in the same hand :

بلغ بحمد الله مقابلته على ذبح عديدة فصيح ان شاء
 الله تعالى بتاريخ حادى عشرين شهر ذى القعدة سنة
 خمسين وثمانى مائة والحمد لله رب العالمين *

On the blank pages there are several notes scribbled in very illegible
 hands, of which the following may be of some interest :

الحمد لله رب العالمين ولد المولود المبارك محمد حبيب
 الدين بن الشيخ الصالح زين الدين عمر هذه
 المباركة وهى سنة اجزا [?] فى اخر ليلة يسفر صباحها
 عن يوم اثنين ثانى عشر شهر رجب الفرد من شهور سنة
 احدى وستين وثمانى مائة انشاء الله نشوا صالحا بمنته
 وكرمه * والحمد لله الخ

الحمد لله رب العالمين بتاريخ خامس عشرين شهر الله
 المعظم قدرة رمضان من شهور سنة وخمسين وثمانى مائة
 اندرج بالوفاء الى رحمة الله تعالى الفقير الى الله الله محمد

الصالحى [?] بركة المشرفة شرفها الله وعظمها الحمد لله
وحده الخ

This volume has apparently been a *Waqf* at one time ; for on leaf 1a stands وقف بىرام بيك . On the same page : Ex bibliotheca ducali Hilpertohusana. Stamped oriental leather binding ; book-plate as No. 2.

4-5. Al-'Idrisi (the Sharif 'Abū 'Abd Allāh b. Muḥammad b. M. b. 'Abd Allāh b. 'Idris)—*Nuzhat al-mushtāq fī ikhtirāq al-'āfāq*.

A very careful collation (with Roman abridgment 'e typographia Medicea,' 1592?) of the Oxford MSS., Pococke 375 and Grav. 42, DCCCLXXXIV. and DCCCLXXXVII., in *Bibl. Bodl. Cat.* Vol. I., p. 192. The collator was Rev. George Cecil Renouard, and in the second volume the date 13 Aug., 1823, is given. At the end of the first volume is the following note : Extraits du traité de géographie d'Edrisi d'après les deux exemplaires de la bibliothèque d'Oxford, et collation de quelques passages des deux manuscrits, par le révérend George Cecil Renouard, qui avait enterpris une édition du texte arabe avec une version anglaise. C'est ici le premier volume. Les deux volumes m'ont été offerts par M. Renouard le 30 Juin, 1854, dans une lettre datée de Swanscombe, Dartford, Kent. Reinaud.

The collation extends over Climate I., parts 1-10, II. 1-7, III. 1-5, and IV. 1. Of the Oxford MSS. there have already been used by Dozy and de Goeje in the *Description de l'Afrique et de l'Espagne*, Climates I. 1-5, II. 1-4, III. 1-4, and IV. 1.; by Gildemeister, in *Idrisi's Palestina et Syria* (Bonn, 1885 : compare, too, Rosenmüller, *Analecta arabica III.*), III. 5 and IV. 5 (extracts); by Schiaparelli and Amari, in *L'Italia descritta nel "Libro del re Ruggero"* (Rome, 1883), IV. 2 and 3, V. 2 and 3; by Amari, in *Biblioteca Arabo-Sicula* (Leipzig, 1857), IV. 2. This leaves a comparatively small unpublished part for which this collation is available. In view of Gildemeister's note on p. 18, it may be worth mentioning that Renouard read the date of Pococke 375 as A. H. 960, in opposition to Gagnier's 806 and Uri's 906. Dozy read it as 860.

From a notice prefixed to Lee's translation of Ibn Baṭūṭa (London, 1829) it would appear that this was a preparation for a translation to be published by the Oriental Translation Committee.

¶ 6. Ibn Duraid ('Abū Bakr Muḥammad b. al-Ḥasan) al-'Azdi—*Al-qasida al-maqṣūra*.

Az-Zamakshari (Jār Allāh 'Abū-l-Qāsim Maḥmūd b. 'Umar)—*Kitāb as-Sawābiḡ fī sharḥ an-nawābiḡ*.

*** A carefully written manuscript in a European hand (Schultens'), with few vowels. It begins—

قصيدة ابن دريد خمسة برسم خزانة مولانا السلطان
الملك المظفر اعز الله نصره [the space of a line blank] مقصورة
ابى بكر بن محمد بن الحسن بن دريد الازدى

١٠ يا ظبية أشبه شى بالمها رائعة بين العقيق والورى
 ويورى سدير
 المها جمع مهاة وهى البقرة الوحشية يشبه بها وبالظبية
 المعشوق الخ

Thus it is a commentary that follows, and not a ختميس : at the end
 is the following colophon : تم بعون الله وحسن توفيقه وفرغ :
 من تحريره العبد المذنب المحتاج الى رحمة الله محمد بن
 محمد القونى الكاذب فى الثامن عشر من رجب سنة
 اثنتين وسبعين وستمائة ❀

The date and the name of the transcriber are the same as those of Cod.
 1072 Warn. (*Cat. Bibl. Lugd.*, Vol. ii., pp. 49 ff.) and this may be from
 that MS. : then the Nawābigh begin :

اللهم ان ما منكننى من النعم السواغ
 الهام هذه الكلام النواغ
 الالهام هو من قولهم الهمة الله الخير الهاما اى القاه فى
 روعة الخ

It appears to be a copy of Cod. 814 (8) Warn., leaves 219-243 (*Cat. Bibl. Lugd.*, Vol. i. [2d edit.], p. 219); and contains the text with extracts from at-Taftāzānī's Comm. up to *وليس اعماله بفاحشاته* on p. 103 of Schultens' edit. (*Lugd. Bat.*, 1772); there it breaks off abruptly, and there follows immediately : Explicit MS. Cl. Schultensii manu descriptum nullo finiti operis addito indicio. There are interlinear and marginal glosses in Latin.

7. Al-Jurjānī ('Abd al-Qāhir b. 'Abd ar-Raḥmān)—*Al-'awāmil al-mī'a*. With a commentary. Written in at least two generally legible hands, on oriental glazed paper, without vowels, but with diacritical points; some marginal corrections; catchwords to leaves: text sometimes underlined in red, sometimes in black, but both irregularly; 105 leaves; gatherings @ 5 but very irregular; 11 lines to page; size of page 14.75 × 10.5, of written part 9.5 × 6.5.

The commentary is anonymous, and in the manuscript catalogues accessible to me I can find traces of two other copies only, also anonymous, and both in the Escorial: see Derenbourg, *Les manuscrits arabes de l'Escorial*, Vol. i., pp. 103-4; Casiri, *Bibliotheca Arabico-Hispana Escorialensis*, Vol. i., p. 40. Casiri gives name of author as Khālid b. 'Abd Allāh b. 'Abī Bakr al-'Anṣārī, but apparently through confusion with another work in the same volume. It begins after the *basmala*—

الحمد لله (sic) لمن وجب علينا ثناؤه ولمن لا يزول من صب
[حيث Derenb.] النعم علينا غناؤه والصلوة (sic) على محمد
وبعد فاني لما رايت الطالبين يطلبون (sic) شرحا للعوامل
للشيخ الامام عبد القاهر على اعرابها اردت ابين الخ

It is incomplete at the end, breaking off abruptly in the treatment of
the *mubtada'* and *ḥabar* at the foot of leaf 105b : مع خبره
والابتداءً جملة اسمية معطوفة على جملة متقدمة والواو ابتدائية هو
ضمير مرفوع منفصل مرفوع محلاً بانه مبتدأ

The remainder is missing, with the colophon.

8. Ibn 'Abī 'Usaibi'a (Muwaffaq ad-Dīn 'Abū l-'Abbās 'Aḥmad b. al-Qāsim b. Khalifa b. Yūnus as-Sa'dī al-Khazraji)—*Kitāb 'Uyūn al-'anbā fī ṭabaqāt al-'aṭṭibā*.

A copy of the Vienna MS. Mxt. 180 (II. 330 No. 1164 in Flügel's Cat.), apparently made for Müller by Hassan and Langer. It consists of 843 large leaves, in 9 fasciculi. On the value of the MS. see Müller's edit., Vol. ii., p. xviii. Further description of this transcript is unnecessary.

4. Non-Jewish religious ceremonies in the Talmud; by Dr. I. M. Casanowicz, of Washington, D. C.

The Talmud is not only the storehouse of the Jewish religious and mental life for more than seven centuries, but also a panopticon, as it were, of the whole ancient world. For just the time which this encyclopædia of the Jewish mental history encompasses, namely from the 4th century before to the 4th after Christ, was the period in which the Jewish nation was drawn into the circle of the pagan world, not only in political life but also in the domain of culture and civilization. Long before Palestine was brought under the supremacy of Rome, it came into close contact and conflict with that phase of Greek culture and civilization which is called Hellenism, and it might be expected that the mental life of the prominent nations of that period, which, moreover, was characterized by its cosmopolitanism and syncretism, will be found in some way reflected and mirrored in the Talmud.

Limiting ourselves to the representation of the religious ceremonies of the nations that came under the observation of the authors of the Talmud, we give in the following pages a specimen of the material which the Talmud contains for a study of the religious practices of the ancient world, as found in the tract *Aboda Zarah*.

This section of the Talmud, as its name indicates, *cultus alienus sive extraneus*, which in the talmudical and rabbinical usage of language means 'idolatry,' contains the laws relating to idolatry and the enticers or seducers to it, and treats in eight chapters of : 1. The

festivals of idolaters ; 2. The social and commercial intercourse with them ; 3. Images and other objects of pagan worship ; 4. Matters pertaining to idolatry.

The treatise is written with the object of protecting and guarding Judaism against the encroachments of Paganism.

We arrange the statements of the Talmud, adding the parallels from the classical writers where there are such, under the following headings : 1. Seasons ; 2. Places ; 3. Objects ; 4. Offerings and mode of worship ; 5. Witchcraft.

1. *Seasons of Worship.*

"It is forbidden to enter into any transactions with idolaters three days before their festivals. . . . And these are the festivals of the idolaters : the *Calendae*, *Saturnalia*, *Cratesim*, the day of the *Genesia* of the kings, the days of birth and death. These are the words of Rabbi Meir.* The (other) wise men say : the death at which a (public) cremation takes place is connected with idolatry, otherwise not ; while in case of shaving the beard and front-lock, of returning from a sea-voyage, of release from prison, or of giving a festival to a son, it is forbidden to have converse with this single man and on this single day only." (i. 1. 1a ; 3. 8a.)

"Rab Chanin† says the *Calendae* takes place eight days after the solstice (of Tebeth=December), the *Saturnalia* eight days before the same solstice." (i. 1. 6a.)

Calendae means properly the day of summoning, from *calare* 'summon.' Macrobius‡ and Varro§ mention that it was the duty of one of the *pontifices* to watch for the first appearance of the new moon, and, as soon as he descried it, to carry word to the *rex sacrorum*, who then summoned the people and offered a sacrifice. The *Calendae*, i. e. the first day of each month, were consecrated to Juno. Also to the *Lares* gifts were offered on the *Calendae*.|| The *Calendae* of January, which are alluded to in our passage, were celebrated with special solemnity, and were called the *Calendae par excellence*.¶

The *Saturnalia* were celebrated in December, at first only for one day, on the nineteenth,** later for several days, beginning on the seventeenth,†† in honor of Saturnus (Cronos), with sacrifices in open air, and were accompanied by great merriment.‡‡

The meaning of the word *genesia* (γενεσία) is discussed 10a, and decided to mean the assuming of the reign by the king, while that of *cratesim* (κρατήσις) is said to be the obtaining of the supremacy of Rome, 8b. The Latin equivalent of γενεσία, *natalis*, was also employed in a wider sense. Thus Spartianus, *Vita Adriani* 4, says : "quando

* Lived in the second century A. D.

† Lived 299–352 A. D., in Machuza.

‡ Saturn i. 15.

§ *De re rustica* i. 37.

|| Preller, *Römische Mythologie*, p. 490.

¶ Grünbaum in ZDMG. xxxi. 277.

** Livy ii. 21. 2.

†† Dio Cass. 59. 6 ; Macrobi., l. c., i. 10 ; Suet. *Caligula* 17.

‡‡ Macrobi., l. c., i. 7, 8, 10, etc.

et natalem adoptionis celebrari jussit. Tertio Iduum earundem quando et natalem imperii instituit celebrandum ;" to which Casaubon remarks: "Antiqui vocarunt natales omnes dies propter aliquam lætitiā insignem sibi solemnes ; inde in historiis principis ejusdem tot natales." The Jerusalem Talmud, i. 39c, takes *γενεσίς* in the meaning of birthday, and *κράθσεις* of the installation of the king in his office.

That these days of the Roman emperors were religiously celebrated is attested by Roman writers.* So were also offerings made to the *Lares* on the birthday, at the entering of a son on the age of maturity, on the happy return from a voyage, etc., of private persons.†

Funerals, with the Greeks as well as with the Romans, were accompanied by a sacrifice and a funeral repast, especially on the ninth day after burial.‡

"These (viz. those named above) are the festivals of the Romans. Which are those of the Persians? The Motredi, Turiski, Moharneki, and Moharin. These are of the Romans and Persians ; and which are of the Babylonians? The Moharneki, the Arquenithi, and the tenth of Adar (March-April)." (11b.)

2. *Places of Worship.*

Rab§ said there were five principal (established) places of idolatry : the house of Bel in Babylon, the house of Nebo in Cursi, Tar'atha in Maphog, Çarepa in Askalon, Nishra (eagle) in Arabia." (11b.)

The temple of Bel, i. e. of Bel-Merodach, in the city of Babylon, of which he was the tutelar deity, was quite celebrated in antiquity. The principal seat of worship of Nebo was, according to the cuneiform inscriptions, Borsippa, the sister-city of Babylon. Under Çarepa of Askalon probably Serapis is to be understood.|| According to Hai Gaon,¶ there was in a mosque of Arabia a stone with an eagle engraved on it, to which religious homage was paid,** and it is very likely that in pre-Islamic times such an object existed as the Ka'aba in Mecca.

"It is allowed to assist in the building of platforms and bath-houses ; but when the cupola is reached where idols are placed, it is forbidden." (16a.)

"Proclus the philosopher asked of Rabban Gamaliel,†† while he was in the bath of Aphrodite at Acco (Ptolemais), why he was bathing in a bath where an idol is set up? Gamaliel answered : She (i. e. Aphrodite) came into our (territory), not we into hers ; the bath was not

* Sueton. *Vespasian* 6 ; *Tiberius* 53 ; Tacit. *Histor.* ii. 79 ; Pliny, *Panegyricus* 53

† Preller, l. c., p. 491.

‡ Juvenal v. 84 ; Augustine, *Confessions* vi. 2. 2.

§ Principal of the Academy of Sora, died A. D. 247.

|| Levy, *Wörterbuch* iv. 222.

¶ Lived 969-1038 in Pumbeditha.

** Levy, *ib.* iii. 455.

†† Gamaliel II., President of the Academy and Synhedrion of Jabne (Jamnia) at the end of the first and beginning of the second century A. D.

made for Aphrodite, but Aphrodite for the bath (i. e. to decorate it)," (iii. 5. 44b.)

Baths equipped with halls, libraries, etc., and decorated with statues, are often spoken of in the ancient authors.*

In another passage (iv. 6. 53b) "platforms (βῆμα) of kings" are mentioned, which Rashi explains to have been stone structures erected on the road where the king had to pass. On these were placed idols, that the king may worship them in passing.

"Rabbi Meir says it is forbidden to visit the theaters and circuses, because they deliberate there on the affairs of idolatry." (18b.)

3. *Objects of worship.*

"Rabbi Ishmael† says: three stones, arranged one at the side of the other, make out a Mercury, and are forbidden to make use of; but two are allowed." (iv. 1. 49b.) Another authority defines a Mercury thus: "two stones on each side and a third one placed upon them." (50a.) It was the old primitive form of worship, and represented not the Roman Mercury, but the Greek Hermes, with whom, however, Mercury was in later time identified. Hermes was originally considered a deity of crops, flocks, and roads, and particularly as Hermes ἐνόςιος, i. e. the omnipresent protector of roads; pillars of stone were raised in his honor at cross-roads, to which every passer-by used to add a stone. As early as Homer these ἑρμεῖα or ἑρμεῖοι λόφοι were known.‡ But it is a well-known fact that the crude primitive representations of the deities, like the *Xoanes* etc., were through the whole period of classical antiquity most devoutly revered in Greece and Italy, and survived down to the centuries of the Christian era. The Hermæ, in particular, not only were seen by Strabo in Egypt§ and Pausanias in Greece,|| but have also been found by recent travelers in Greece and other countries.¶ It is therefore probable that the Greek settlers also introduced them into Palestine and Syria.

"Rabbi Judah** adds (to that which is to be considered as an idol and therefore forbidden to make use of) the representation of a suckling woman and Serapis . . . , but this only when he has a *modius* and she a sucking child." (43a.)

Serapis or Sarapis, Egyptian Asarhapi=Osiris-Apis, was the Egyptian Osiris in the character of a god of the lower world, his corresponding incarnation as a god of the upper world being the bull Apis. Under the Ptolemies, Osiris and his sister-wife Isis were amalgamated with Greek divinities. As Serapis he included the Egyptian Osiris, Pluto,

* Cf. especially Vitruvius v. 10 ff.; Seneca Ep. ii. 2.

† Died as martyr under Hadrian about 134 A. D.

‡ Cf. Odys. xvi. 471.

§ Cf. xvii. 818.

|| Cf. iv. 33. 3.

¶ Cf. Ross, *Reisen durch Griechenland*, i. 18, 174.

** Disciple of Akiba, 100-160 A. D. (?)

Æsculapius, and Zeus. His temple at Alexandria, the Serapeion, was one of the most famous buildings in antiquity. This new worship rapidly spread from Egypt to Greece.* In Rome the Egyptian cults make their appearance in the second century B. C., and in 48 B. C. a temple was erected in honor of Serapis and Isis by the Triumvirs. Their worship, favored by the emperors, spread especially in the Roman provinces. The worship of Serapis in Palestine is, moreover, attested by coins of Cæsarea, Ptolemais (Acco), Neapolis (Shechem), and Ælia Capitolina (Jerusalem).† Serapis as Zeus-Serapis was represented—as may be seen from the surviving colossal bust in the Vatican—with a *modius*, or corn-measure, upon his head. The suckling woman with infant may have been a representation of Isis, who was often conceived as having her son Horus on her lap; or of Juno, who, as goddess of childbirth (Juno *Lucina*), was represented on her festival, the *Matronalia*, with an infant in swaddling clothes; or also of Aphrodite-Ashtarte.

“Rabbi Meir says: all kinds of images are forbidden, because they are worshiped once a year; but the wise men say it is not forbidden unless the hand holds a staff, or a bird, or a globe—which shows, as Rashi explains, that great importance was attributed to the image.” (iii. 1. 40b.)

There are still extant numerous statues with the objects named above attached to them, as for instance a scepter or staff to those of Zeus, Hera (Juno), Hermes (Mercury), Æsculapius; and a bird to those of Apollo and Aphrodite (Venus).

“Fragments of images are allowed, but the representation of a hand or foot is forbidden, for these things are worshiped.” (iii. 2. 41a.)

“When one finds vessels with a representation of the sun, the moon, a serpent (dragon), upon them, he shall carry them to the Dead Sea (i. e. destroy them).” Another authority says: “All representations are allowed except that of a serpent.” (iii. 3. 42a.)

The representation of divinities and mythological scenes on vases, lekyths, etc., is still extant in numerous specimens. That these vessels were objects of religious homage is not known from any other source. The serpent particularly was the attribute of many divinities. It was also the symbol of Æsculapius, who was brought from Epidaurus to Rome in the shape of a snake when his worship was introduced into that city 293 B. C. It was also the popular representation of the *Genii*.‡

“Idolaters who worship mountains and hills—they themselves (i. e. the mountains and hills) are allowed, but what is upon them (trees) is forbidden” (iii. 6. 45a.)

Sacred groves and trees are often mentioned in the classical writers.§

* Preller in *Berichte der sächsischen Gesellschaft der Wissenschaften*, 1854, p. 195 ff.

† Schürer, *Geschichte des jüdischen Volkes im Zeitalter Jesu Christi*, i. 546, 586; ii. 15 ff.

‡ Preller, *Römische Mythologie*, pp. 76, 566; Vergil, *Æn.* v. 95.

§ Cf. e. g. Vergil, *Georg.* iii. 332; *Æn.* i. 165 ff; see also Preller, l. c., p. 297.

Particular trees were sacred to individual divinities: so, for instance, the oak to Zeus, the laurel to Apollo, the myrtle to Aphrodite. The worship on elevated places is also often referred to in the Old Testament.

"It is forbidden to put the mouth to the statues which pour out water, in order to drink, because it might give the appearance of kissing the idol." (12a.)

"With regard to the statues of kings the opinions are divided. According to Rabbah,* all agree that those of cities are allowed to be made use of, because they are made for the sake of ornament [not with a view to religious worship]." (41a.)

It is well known that since Augustus the provinces especially were zealous in the cult of the emperors. It was with them an expression of loyalty to Rome. Caligula demanded divine worship even from the Jews, and only his timely death prevented the temple at Jerusalem from being defiled by his statue.

4. *Offerings and Mode of Worship.*

"It is forbidden to sell to idolaters pineapples, cembrenuts, figs, frankincense, and the white cock. Rabbi Judah says it is allowed to sell a white cock among other cocks, and in the case of a single white cock it may be sold when one of its toes is cut off, for they do not offer a defective victim. . . . Rabbi Meir says it is also forbidden to sell to idolaters dates and palms." (i. 5. 13b.)

The cock was offered to Æsculapius, the god of healing. The specification of a white cock is found only here.

"When one finds upon the head of (a statue or pillar of) Mercury money, garlands, or vessels, they are allowed for use; but vines, garlands of ears, wine, oil, flour, and similar things that are offered upon the altar are forbidden." (iv. 2. 51b.)

"The following objects of non-Israelites are forbidden for any use whatever: wine, vinegar that was originally wine, and skins with a hole in the region of the heart. Rabban Simeon ben Gamaliel† says that if the opening (of the skin) is round it is forbidden, if oblong it is allowed." (ii. 3. 29b.)

The use of wine for libations is well known. The opening of the skins in the region of the heart may refer to the inspection of the entrails of the victims by the haruspices.

"It is forbidden to make ornaments for idols, as chains, earrings, and rings." (19b.)

"A city where there is an idol and where there are booths with garlands and without garlands—the former are forbidden (to enter and make purchases in), the latter are allowed." (i. 4. 12b.)

The distinction is made because the booths decorated with garlands were used in the interest of the cult.

* Died 300 A. D., as principal of the Academy of Pumbeditha.

† President of the Synhedrion at the time of the Judæo-Roman war.

"Rabbi Nathan* says that on the day when taxes are remitted they use to proclaim and make known: 'whosoever shall put a wreath upon his head and that of his animal in honor of the idol, to him the taxes will be remitted.'" (13a.)

"Rab Judah said that Rab was teaching concerning an idol that was worshiped with a stick (Rashi: a stick was swung in front of it); that if one broke a stick in front of it he was guilty (of an act of idolatry), but if he merely threw it he was free." (50b.)

5. *Witchcraft and Superstition.*

"Said Rabba bar Rab Isaac to Rab Judah: 'there is an idolatrous house in our place, where, when the world is in need of rain, a dream says to them: slaughter a man for me and rain will come. And they slaughter a man and rain comes.'" (55a.)

"Said Zonan to Rabbi Akiba:† 'both of us know that there is no reality in idolatry, and yet we see people going to the temples broken down (as cripples) and returning restored.'" (55a.) The answer of Akiba is to the effect that God does not overrule the pre-ordained destinies of men on account of their foolishness.

"When one goes to the stadia and circuses and sees there the snakes, the conjurors, the flute-players, the clowns (?), the muledrivers (?), the ventriloquists (?), the hierodules (?), and the sigillaria (?), so is this sitting in the seat of the scornful (Psalm i. 1)." (18b.)

These are the references to the religious beliefs and practices of the nations who came under the observation of the Jews about the time of the beginning of the Christian era, derived from a single treatise of the Talmud. Many of the customs recorded are also found in the Greek and Roman writers; some are met with only in this treatise. Altogether, it would seem that the Talmud is not entirely to be disdained as a source of instruction respecting the civilization and religions of the ancient world.

5. On a recent attempt, by Jacobi and Tilak, to determine on astronomical evidence the date of the earliest Vedic period as 4000 B. C.; by Professor W. D. Whitney, of Yale University, New Haven.

At a meeting of the Society in this city nearly nine years ago (Oct. '85), I criticised and condemned Ludwig's attempt to fix the date of the Rig-Veda by alleged eclipses. The distinguished French Indianist, Bergaigne, passed the same judgment upon it at nearly the same time, (*Journ. Asiat.* '86). Although the two criticisms provoked from Ludwig a violent and most uncourteous retort (see his *Rig-Veda*, vol. vi.,

* Lived about 140-200 A. D.

† Died as a martyr under Hadrian.

p. x),* his argument appears to have fallen into the oblivion which alone it merited.

Within the past year, a similar attempt has been made, independently of one another, by two scholars, one German (Prof. Jacobi, of Bonn, in the *Festgruss an Roth*, 1893, pp. 68-74) and one Hindu (Bál Gangádhara Tilak, *The Orion, or researches into the antiquity of the Vedas*, Bombay, 1893, pp. ix, 229, 16mo.), working along the same general line, and coming to an accordant conclusion: namely, that the oldest period called Vedic goes back to or into the fifth millennium before Christ—an antiquity as remote as that long recognized for Egyptian civilization, and recently claimed, on good grounds, for that of Mesopotamia also. This is a startling novelty; as such, however, we have no right to reject it offhand; but we are justified in demanding pretty distinct and unequivocal evidence in its favor, before we yield it our credence.

The general argument may be very briefly stated thus: The Hindus (as also the Chinese, the Persians, and the Arabs) had a lunar zodiac of 27 (or 28) asterisms, rudely marking the successive days of the moon's circuit of the heavens. Since the establishment of the Hindu science of astronomy, under Greek influence and instruction, in the first centuries of our era, the series of asterisms has been made to begin with Aṣvini (in the head of Aries), for the acknowledged reason that that group was nearest the vernal equinox at the time. But earlier, in the Brāhmaṇas etc., the series always began with Kṛttikā (Pleiades), presumably because, owing to the precession, that group had been nearest to the equinox: and this was the case some two thousand and more years before Christ. Some two thousand and more years yet earlier, the equinox was near to Mṛgaśiras, or the head of Orion; if, therefore, it can be made to appear that the Hindus once began their asterismal system with Mṛgaśiras, and because of the latter's coincidence with the equinox, we shall conclude that they must have done so more than four thousand years before Christ. But the same sum can be worked in terms of months. The Hindu months are lunar, and are named sidereally, each from the asterism in or adjacent to which the moon is full in the given month; but the seasons follow the equinoxes and solstices; hence the rainy season, for example, began about a month earlier when Aṣvini (Aries) was at the equinox than when Kṛttikā (Pleiades) was there, and about two months earlier than when Mṛgaśiras (Orion) was there; and if it can be shown that the year always commenced with a fixed season, and has twice changed its initial month, Mṛgaśiras (Orion)

* His language is as follows: "Anything more completely the opposite (*Wider-spil*) of criticism than the judgment which our, in all points well-considered, discussion of the subject has met with at the hands of Whitney and Bergaigne is not to be conceived. It [the discussion] is refuted in no single point; the judges do not stand upon the ground of criticism, but upon that of personal and wholly unjustified opposition." Perhaps nothing different from this was to be expected from one who could propose such a theory: finding nothing to say in its defense, he was obliged to abuse his critics and impute to them personal motives.

will thus also be proved to have been at the equinox at a recorded or remembered period in Hindu history. And this, in one of the two alternative methods, or in both combined, is what our two authors attempt to demonstrate.

Professor Jacobi sets out by finding in the Rig-Veda the beginning of the year to be determined by that of the rainy season. And first he quotes a verse from the humorous hymn to the frogs, RV. vii. 103. 9, usually rendered thus: "they keep the divine ordering of the twelve-fold one (i. e. of the year); those fellows do not infringe the season, when in the year the early rain has come": that is to say, the wise frogs, after reposing through the long dry season, begin their activity again as regularly as the rains come. Jacobi objects that *dvādaçā*, rendered "twelve-fold," means strictly "twelfth," and ought to be taken here in this its more natural sense; and he translates: "they keep the divine ordinance; those fellows do not infringe the season of the twelfth [month];" inferring that then the downright rains mark the first month of the new year. But *dvādaçā* does not in fact mean "twelfth" any more naturally than "twelve-fold;" its ordinal value, though commoner, especially in later time, is not one whit more original and proper than the other, or than yet others; and the proposed change, partly as agreeing less with the metrical division of the verse, is, in my opinion, no improvement, but rather the contrary; and no conclusion as to the beginning of the year can be drawn from it with any fair degree of confidence. This first datum, then, is too indefinite and doubtful to be worth anything.

Next our attention is directed to a verse (13) in the doubtless very late *sūryā*-hymn in the tenth book (x. 85), where, for the sole and only time in the Rig-Veda, mention appears to be made of two out of the series of asterisms, the Atharva-Veda being brought in to help establish the fact. The subject is the wedding of the sun-bride, and the verse reads thus: "The bridal-car (*vahatū*) of Sūryā hath gone forth, which Savitar sent off; in the Maghā's (RV. Aghā's) are slain the kine (i. e., apparently, for the wedding-feast); in the Phalgunī's (RV. Arjunī's) is the carrying-off (RV. carrying-about: *vivāha* 'carrying-off' is the regular name for wedding)." The Maghā's and the Phalgunī's are successive asterisms, in Leo, Maghā being the Sickle, with α Leonis, Regulus, as principal star; and the Phalgunī's (reckoned as two asterisms, "former" and "latter" Phalgunī's) are the square in the Lion's tail, or β , θ , δ , and 93 Leonis. Now, as Professor Jacobi points out, the transfer of the sun-bride to a new home would seem plausibly interpretable as the change of the sun from the old year to a new one; and hence the beginning of the rainy season, nearly determined as it is by the summer solstice, would be with the sun in the Phalgunī's; and this would imply the vernal equinox at Mṛgaçiras (Orion), and the period 4000 B. C. or earlier.

There is evidently a certain degree of plausibility in this argument. But it is also beset with many difficulties. The whole myth in question is a strange and problematic one. That the moon should be viewed as

the husband of the asterisms, whom he (all the names for "moon" are masculine) visits in succession on his round of the sky, is natural enough; but that the infinitely superior sun, made feminine for the nonce (*sūryā* instead of *sūrya*), while always masculine else, should be the moon's bride, is very startling: nor, indeed, is it anywhere distinctly stated that the moon (*soma*) is the bridegroom, though this is inferable with tolerable confidence from intimations given. *Sūryā* is repeatedly said to go (vs. 7*d*) or go forth (vs. 12*d*) to her husband (and only vs. 38 to be "carried about:" but for Agni, not Soma), or to go (vs. 10*d*) to her house; while any people who had gone so far in observation of the heavens as to establish a system of asterisms, and to determine the position of the sun in it at a given time (no easy matter, but one requiring great skill in observing and inferring), must have seen that it is the moon who "goes forth" in the zodiac to the sun. The astronomical puzzle-headedness involved in the myth is hardly reconcilable with the accuracy which should make its details reliable data for important and far-reaching conclusions. The kine for the feast, too, it would seem, must be killed where the bride is, or when the sun is in Maghā; then if the wedding-train starts when sun and moon are together in the Phalgunī's, which would be ten to fifteen days later, how do we know that they do not go and settle down in some other asterism, further on? And are we to suppose that the couple move and start their new life in the rains? That is certainly the least auspicious time for such an undertaking, and no safe model for the earthly weddings of which it is supposed to be the prototype. On all accounts, there is here no foundation on which to build important conclusions.

Nor shall we be able to find anything more solid in Professor Jacobi's next plea, which is derived from the prescriptions of the *Grhya-Sūtras* as to the time when a Vedic student is to be received by his teacher, and to commence study. *Ānkhāyana* sets this at the season when the plants appear: that is to say, at the beginning of the rains; and it is pointed out that the Buddhists also fix their season of study and preaching in the same part of the year. But *Pāraskara* puts the initiation of the student at the full moon of the month *Ṣrāvaṇa*, which (*Ṣrāvaṇa* being β , α , γ *Aquilæ*) would have been first month of the rains in the second millennium before Christ; while *Gobhila* sets it, alternatively, in the month *Bhādrapada*, which would have occupied the same position more than two thousand years earlier, or when the vernal equinox was at Orion. The author further points out that the *Rāmāyaṇa* (a comparatively very late authority) designates *Bhādrapada* as the month for devoting one's self to sacred study; and that the Jains (whom one would think likely to be quite independent of Brahmanic tradition) do the same. The reason for fixing on this particular season Professor Jacobi takes to be the fact that "the rainy months, during which all out-of-doors occupation ceases, are the natural time of study;" and then he makes the momentous assumption that the designations of *Ṣrāvaṇa* and *Bhādrapada* can be due only to traditions from older periods, when those months began the rainy season respectively. On this point cautious critics will be little likely to agree with him. If the

systematic study (memorization) of Vedic lore began as early as 4000 B. C., and could be carried on only in-doors, and so was attached closely to the in-doors rainy season, we should expect to find it attached throughout to the season, and not to the month, and especially in the case of the Jains ; that these also abandoned the rains is one indication that the consideration was never a constraining one. And the orthodox Vedic student did not go to school for a limited time in each year, but for a series of years of uninterrupted labor ; and on what date the beginning should be made was a matter of indifference, to be variously determined, according to the suggestions of locality and climate, or other convenience—or to the caprice of schools, which might seek after something distinctive. I cannot possibly attribute the smallest value to this part of our author's argumentation.

We are next referred by him to the connection established by several of the Brāhmaṇas between the Phalguni's (β , δ , etc. Leonis) and the beginning and end of the year. The Tāittiriya-Samhitā (vii. 4. 8) and the Pancaviṅṣa-Brāhmaṇa (v. 9. 8) say simply that "the full-moon in Phalguni is the mouth (*mukha*, i. e. 'beginning') of the year ;" this would imply a position of the sun near the western of the two Bhādrapadā's (α Pegasi etc.), and determine the Phālguna month, beginning 14 days earlier, as first month. The Kāuṣītaki-Brāhmaṇa (v. 1) makes an almost identical statement, but adds to it the following : "the latter (eastern) Phalgu's are the mouth, the former (western) are the tail ;" and the Tāittiriya-Brāhmaṇa (i. 6. 2⁸) virtually comments on this, saying that "the former Phalguni's are the last night of the year, and the latter Phalguni's are the first night of the year." The Ṣatapatha-Brāhmaṇa (vi. 2. 2. 18) puts it still a little differently : "the full moon of Phalguni is the first night of the year—namely, the latter one ; the former one is the last [night]." All this, it seems, can only mean that, of two successive (nearly) full-moon nights in Phalguni, the former, when the moon is nearer the former Phalguni, is the last night of one year, and the other the first night of the next year ; and the only conclusion to be properly drawn from it is that the full-moon of the month Phālguna divides the two years. But Professor Jacobi, by a procedure which is to me quite unaccountable, takes the two parts of the statement as if they were two separate and independent statements, inferring from the one that Phālguna was recognized by the Brāhmaṇas as a first month, and from the other that the summer solstice was determined by them to lie between the former and latter Phalguni's—as if the sun in the Phalguni's entered into the question at all, and as if the Brāhmaṇas ever made any pretense to such astronomical exactness as would be implied in their drawing the solstitial colume between the former and the latter Phalguni's ! What they have really done is bad and blundering enough, but quite of a piece with their general treatment of matters involving astronomical observation. For it is senseless to talk, in connection with the full moon in Phālguna, of a year-limit between the two Phalguni's ; if the definition would fit the circumstances in a given year, it could not possibly do so in the year following, nor in the year after that, nor ever in two years in succes-

sion. All that we have any right to infer from these Brāhmaṇa passages is that they recognize a reckoning of the year (among others) that makes it begin in Phālguna; and this might be for one of a great many reasons besides the occurrence of the solstice near that group of stars four thousand years before Christ. In fact, all inferences drawn from varying beginnings of the year, in one and another and another month, seem to me helplessly weak supports for any important theory. With their customary looseness in regard to such matters, the ancient Hindus reckoned three, or five, or six, or seven seasons (*ṛtū*) in the year; and there was no controlling reason why any of these might not have been given the first place—the vacillating relations of the lunar months to the actual seasons adding their share to the confusion. Of course, any given month being taken as first, the ancient four-month sacrifices, of primary importance, would be arranged accordingly.

Professor Jacobi even tries (though with becoming absence of dogmatism) to derive a little support from the names of the two asterisms which, with the vernal equinox at Mrgaṣiras (Orion's head), would enclose the autumnal equinox, namely Jyeṣṭhā 'eldest' before the equinox, and Mūla 'root' after it: the former, he thinks, might designate the "old" year, and the latter be that out of which the new series springs and grows. But how should *jyeṣṭha*, 'oldest' or 'chief,' ever come to be so applied? The superlative is plainly and entirely unsuited to the use; and an asterism does not suggest a year, but only a month; and the asterism and month just left behind would properly be styled rather the "youngest," the most recent, of its series. If we are to determine the relations of the asterisms on such fanciful etymological grounds (after the manner of the Brāhmaṇas), I would repeat my suggestion, made in the notes to the *Sūrya-Siddhānta*, that Mūla (tail of the Scorpion) is 'root' as being the lowest or southernmost of the whole series; that Jyeṣṭhā (Antares etc.) is its "oldest" branch, while in Viçākhā 'divaricate' (α and β Libræ) it branches apart toward Svāti (Arcturus) and Citrā (Spica); this is at least much more plausible than our author's interpretation.

Finally, after claiming that these various evidences "point unmistakably" (*untrüglich*) to the asserted position of the equinox at Orion in the oldest Vedic period, Professor Jacobi goes on as follows: "The later Vedic period has applied a correction, consisting in the transfer of the initial point to Kṛttikā (the Pleiades); and this very circumstance gives their determination a real significance; it must have been nearly right at the time of the correction." Here he seems to me to be wanting in due candor; I cannot see that he has any right to make such a statement without at least adding a caveat: "provided the system of asterisms was really of Hindu origin and modification," or something else equivalent to this. Doubtless he cannot be ignorant of the discussions and discordance of opinion on this subject, nor unaware that at least some of those who have studied it most deeply hold views which would deprive his statement of all value. If the asterismal system were limited to India, there would be much less reason for regarding it as introduced there from abroad—and yet, even in that case, some would

doubtless have been acute enough to suspect a foreign origin. But it is found (as was pointed out above) over a large part of Asia; and the only question is whether it was brought into India or carried out of India. What possible grounds has Professor Jacobi for regarding its Indian origin as so certain that the opposing view has no claim even to be referred to? The eminent French astronomer Biot thought that he had proved it primitively Chinese, by an array of correspondences and historical evidences alongside of which our author's proofs of a remote antiquity for the Veda make no show at all. Other scholars—e. g. Sédillot—have been as confident that the system had its birth in Arabia. Weber and I, on whatever other points we may have been discordant, agreed entirely, some thirty-five years ago, that it must have been introduced into India, probably out of Mesopotamia; nor, I believe, has either of us seen any reason for changing his conviction since. And I know of no modern scholar whose opinion is of any value that holds and has endeavored to show the contrary. Nothing in the Rig-Veda nor in the Brāhmaṇas, and nothing in the later Sanskrit literature, tends in any degree to give us the impression that the ancient Hindus were observers, recorders, and interpreters of astronomical phenomena. On the contrary, their treatment of such facts (we have already seen an instance or two above) shows the same looseness and heedlessness that is characteristic of the Hindu genius everywhere in its relation to objective truths, to successive historical occurrences. That no hint of the existence of a planet can be found in the Rig-Veda is enough by itself to show that the Hindus of that period had not devised an asterismal system. A late hymn or two, and passages in the Brāhmaṇas, show the recognition of a year of 360 days, divided into 12 months of 30 days each, beside a system of lunar months, which would give a year of only 354 days: what their relation to one another, how their differences were reconciled, and by what method either reckoning was kept in unison with the true year, no one knows. The earliest so-called "Vedic" astronomical manual (*vedāṅga*), the Jyotiṣa, whose first object, seemingly, it ought to be to give rules on such points, is mostly filled with unintelligible rubbish, and leaves us quite in the lurch as regards valuable information. And when, not long after the beginning of our era, the Hindus had borrowed from Greece a true astronomical science, the product of long-continued and accurate observation, they at once proceeded to cast it into an artificial form, founded on assumed and consciously false data, adapting it to purely closet use, with exclusion of further observation: taking in as part of the data a grossly inaccurate determination of the positions of certain selected "junction-stars" (*yogatārā*) of the asterisms, which positions they called *dhruva* 'fixed,' thus virtually denying the precession. That such observers and reasoners as these should have been capable, some four or five thousand years before Christ, of determining, or believing themselves to have determined, the position of the summer solstice as between β and δ Leonis lacks to my mind any semblance of plausibility. Instead of shifting the beginning of the asterismal series from Mṛgaśīras (Orion's head) to Kṛttikā (Pleiades) in the later Vedic period, I hold it as alone

probable that they received the system from abroad with Kṛttikā at its head, and would probably have retained it in that form until the present day but for the revolution wrought in their science by Greek teaching. When the beginning was shifted from Kṛttikā to Aṣvini (Aries), it was for good reason, and owing to the change of position of the equinox; but the credit of this belongs to the Greeks, and not to the Hindus.

If Professor Jacobi's main argument is thus wholly destitute of convincing force, neither can we attribute any greater value to the supporting evidence which he would fain derive from the mention of a polar star (*dhruva*, lit'ly 'fixed') by the Gṛhya-Sūtras, solely and alone as something which a bride is to be taken out and made to look at on the evening of her wedding-day. For such observers, and for such a trifling purpose, any star not too far from the pole would have satisfied both the newly-wedded woman and the exhibitor; there is no need of assuming that the custom is one handed down from the remote period when α Draconis was really very close to the pole, across an interval of two or three thousand years, during which there is no mention of a pole-star, either in Veda or in Brāhmaṇa.

The success of the author of the other work here considered in establishing his kindred thesis is, as will readily be inferred, no better. Mr. Tilak is not by profession a student of Indian antiquity, nor of astronomy, but a lawyer—a pleader and lecturer on law in Poona. He was, as he states, led to his investigation by coming upon Krishna's claim in the Bhagavad-Gītā "I am Mārgaṣṛsha among the months," ascribing to it an importance and authority which, considering the late date and secondary origin of that episode of the Mahābhārata, Western scholars would be far from endorsing. The investigation is carried on in an excellent spirit, with much and various learning, and with commendable ingenuity; it assembles many interesting facts, and makes some curious and attractive combinations; but, as appears to me, its arguments are in general strained, its premises questionable, and its conclusions lacking in solidity. A book larger than his own would be needed to discuss fully all that the author brings forward; nothing more can be attempted here than to excerpt and comment upon leading points, in such a way as to give a fair impression of his strength and his weakness.

Mr. Tilak's main object is, as already intimated, to establish that the asterism Mrgaṣiras (lit'ly 'deer's head') with its surroundings, or the constellation Orion with its neighbors, was a great center of observation and myth-making in the earliest time, even back to the period of Indo-European or Aryan unity—and this, not only because of its conspicuous beauty as a constellation, but also, and principally, for its position close to the vernal equinox in the fifth millennium before Christ: somewhat, it may be added, as the equal or superior prominence of the Great Bear is due in part to its character as a constellation, and in part to its place near the pole.

To this central point of the value of Orion we are conducted by a well-managed succession of stages. After a general introductory chap-

ter, on which we need not dwell, the second is entitled "Sacrifice *alias* the Year;" and in it begin to appear the misapprehensions to which reference has been made above. That there is a close relation between natural periods of time and the sacrifices is a matter of course: the morning and evening oblations depend upon the day; the new-moon and full-moon ceremonies, upon the natural month; the four-month or seasonal sacrifices, upon the recognized seasons; and so, when the round of the year had made itself plain, there were established rites to mark its recurrence. But Mr. Tilak appears to hold that the year was fixed and maintained by and for the sake of the great *sattra* ('session') or protracted sacrifice that lasts a whole year. Unmindful of the fact that every ceremony of more than twelve days is called a *sattra*, and so that there are *sattras* of a great variety of lengths, even year-*sattras* for variously measured years, and (at least theoretically) for series of two or more years; failing also to see that they are, all of them, the very superfetation of a highly elaborated sacrificial system, implying orders of priests, accumulated wealth, and, one may even say, regulated city life—he views (pp. 13-14) the year-*sattra* as a primitive Indo-European institution, the necessary auxiliary to a calendar. "Without a yearly *sattra* regularly kept up, a Vedic Rishi could hardly have been able to ascertain and measure the time in the way he did. . . . The idea of a sacrifice extending over the whole year may be safely supposed to have originated in the oldest days of the history of the Aryan race." Then, in order to trace back into the Rig-Veda a recognition of the two *ayanas* ('courses') or halves of the year, the northern and the southern—those, namely, in which the sun moves respectively northward and southward, from solstice to solstice, or else (for the word has both varieties of application) on the north and on the south of the equator, from equinox to equinox—he determines that meaning to belong to the Vedic terms *devayāna* and *pitṛyāna*: and this is an utter and palpable mistake; the words have no such value; *devayāna* occurs a dozen times, usually as adjective with some noun meaning 'roads,' and never signifies anything but the paths that go to the gods, or that the gods go upon, between their heaven and this world, to which they come in order to enjoy the offerings of their worshipers; and *pitṛyāna*, occurring only once, designates in like manner the road traveled by the Fathers or *manes*, to arrive at their abode. There is, in fact, nothing yet brought to light in the Rig-Veda to indicate, or even intimate, that in its time such things as *ayanas* and equinoxes and solstices, regarded as distances and points in the heavens, had ever been thought of; everything of the kind that the author of *Orion* thinks to find there is projected into the oldest Veda out of the records of a much later period. And these two fundamental errors are enough of themselves to vitiate his whole argument.

The next chapter (III.) is entitled "The Kṛittikās." Over its main thesis—namely, that in the earlier time the asterismal system began with Kṛttikā (Pleiades) instead of Aṣvini (Aries)—we need not linger; that is conceded by everyone, and has been sufficiently set forth above: together with, it is believed, its true explanation. The (as concerns

this point) crucial question respecting the origin of the system Mr. Tilak barely mentions in his Introduction (p. 6 ff.), declining to enter into any discussion of it: and, from his point of view, not without reason; for if he is in a position, as he claims, to prove that India had a yet earlier system beginning with Mṛgaçiras (Orion), he has demonstrated the Hindu origin, in spite of all that has been said and can be said against it. A considerable part of the chapter is taken up with a full quotation, accompanied by translation and discussion, of two parallel passages from the Tāittiriya and the Kāushītaki Brāhmaṇas, respecting the times of consecration for the year-*sattra*. Four different times are prescribed in succession: the last quarter in the month Māgha, the full-moon of the following month Phālguna, the full-moon of the next succeeding month Cāitra, and four days before the full-moon (i. e., doubtless, of Cāitra; but some native authorities regard Māgha as intended: see Weber, *Nakshatras*, ii. 343); objections are raised to the convenience of the first two, and the others (virtually one) are approved as acceptable. If, now, this *sattra* were, as Mr. Tilak assumes and fully believes, a counterpart of the year, established in primeval times, on competent astronomical knowledge, for the purpose of keeping the calendar straight, and accordingly adapted precisely to the movements of the sun; and if its *vishuvant* or central day (with 180 days of ceremonies in a certain order preceding it, and 180 days of the same in a reverse order following it) were attached necessarily to an equinox, because the word *vishuvant* implies an equal division of the day between light and darkness; and then if there were no way of explaining the series of alternative beginnings excepting by recognizing two of them as conservative traditions from times that fitted these astronomical conditions—then, and only then, we could use them as sufficient data, inferring from them the positions of the equinox, and hence the epochs, at which they were successively established. But all these necessary conditions appear to be wanting. Weber, in his essays on the *Nakshatras* (ii. 341 ff.), quotes and expounds the same Brāhmaṇa passages in full. He demonstrates yet other allowed seasons for beginning the year-*sattra*, out of the Kāushītaki-Brāhmaṇa itself and out of the Sūtras. So far as any preference is shown in connection with the incidence of the *vishuvant*-day, it is for the solstice instead of the equinox. And the texts which set forth the different dates side by side are plainly unaware of any deeper reason for the choice of one instead of another. In short, there is nothing to be fairly inferred from these quoted passages except that considerable diversity prevailed in practice, and was allowed, as regards the time for commencing the *sattra*, and that the element of astronomical exactness did not enter into the case at all. How, indeed, should it do so, when the date was attached to any one of the constantly shifting lunar months? no fixation expressed in such terms could ever be accurate two years in succession. If there had been among the primitive Indo-Europeans, or among the earliest Hindus, science enough to establish such a rite by a certain sidereal position of the sun, there would have been enough to keep it there, without transference to an ever-oscillating date.

The next chapter is called "Agrahāyana," and is devoted to a learned and ingenious argument to prove that, as the word *agrahāyana* means 'beginning of the year,' and is recognized as a name for the month Mārgaśīrsha (with the moon full near Orion), that month must have been at one time regarded as first of the twelve (or thirteen). This may be freely granted, without at all implying that the asterism Mṛgaśīras (Orion's head) was ever first of the asterismal series, and for the reason that it lay nearest to the vernal equinox. The extended and intricate discussions into which Mr. Tilak enters as to the relation of *agrahāyana* and its derivatives, *āgrahāyaṇī* etc., as laid down and defended by various native lexicographers and grammarians, are rather lost upon us, who value far more highly a few instances of actual and natural use in older works than the learned and artificial lucubrations of comparatively modern Hindu savants; that *agrahāyana* itself designates the asterism Mṛgaśīras, and so proves it to have been first asterism of a series beginning and ending with the year, is by no means to be credited, in the absence of any passages exhibiting such use, and against the evidence of all the analogies of asterismal nomenclature.

In the following chapter, "the Antelope's Head," we come to the very center of our author's position. By the name antelope's or deer's head (*mṛgaśīras*) has been generally understood the little group of inconspicuous stars in the head of Orion, constituting one of the series of asterisms, while the brilliant star α in his right shoulder constitutes another, called Ārdrā ('wet'); the whole constellation of Orion has been viewed as the antelope (*mṛga*); and, correspondingly, the neighboring Sirius is named *mṛgavyādhā* 'deer-hunter,' while the three stars of Orion's belt, which point just in the direction of Sirius, are the "three-jointed arrow" (*iṣus trikāṇḍā*) shot by the hunter. Mṛgaśīras, as so understood, is in itself an insignificant group, and we have some reason for wondering why the bright γ , Orion's left shoulder, was not selected instead; but the general constellation is so conspicuous that anything standing in a clearly definable relation to it might well be regarded as sufficiently marked; and, at any rate, the identity of this group as the asterism is established beyond all reasonable question by the circumstance that it is accepted as such in the two other systems, the Chinese and the Arab. Mr. Tilak, however—under what inducement, it seems difficult to understand—desires to change all this, and to turn the entire constellation of Orion into a head, with what we call the "belt" running across the forehead at the base of the horns. By so doing he cuts loose altogether from the traditional asterismal systems, makes up an unacceptable constellation with some of the brightest stars omitted, and regards the deer as shot through the top of the skull with the arrow, as if this had been a rifle-bullet. All this, though our author values it so highly as to make his frontispiece of it, is to be summarily rejected. If the Hindus of the Brāhmaṇa period saw, as they plainly did, a deer (*mṛga*) in Orion, it should be enough for us that the asterismal system adopts its head as one member; the establishment of the deer itself might be as much older as there is evidence to prove it. Mr. Tilak tries to find something relating to it in the Rig-Veda, by point-

ing out that the dragon slain by Indra is more than once spoken of there as a "wild beast" (*mṛga* : this is the original, and in ancient times the only, meaning of the word); and that, as he claims, Indra cuts off the head of his foe the dragon ; but here, as nearly everywhere that he appeals to the Rig-Veda, his exegesis is faulty ; two of his three passages speak of "splitting" (*bhid*) the head, and the other of "crushing" (*sam-piṣ*) it ; no cutting off is alluded to ; and all attempts to find in the earliest Veda a severed head of a *mṛga*, in whatever sense of the word, are vain. If, as he asserts, there are Hindus at the present time who point out the belt of Orion as the asterism Mṛgaçiras, that can be nothing more than a popular error, substituting for one group of three stars another and brighter one in its vicinity, and easily explainable of a people who have long been notoriously careless as to the real identity of their asterisms.

Then the author goes on to find in the Milky Way, near by, the river that separates this and the other world, and in Canis Major and Canis Minor the two dogs that guard it on either side, and the two dogs of Yama, and the dog of the Avesta, and Saramā, and Cerberus, and the dog whom (RV. i. 161. 13 : see below) the he-goat accused of waking up the Ribhus—all very ingenious and entertaining, but of a nature only to adorn and illustrate a thesis already proved by evidence possessing a quite other degree of preciseness and cogency. We are taught to regard the deer, the hunter, and the dogs as originally Indo-European, the dogs having been later lost (from the sky) by Hindu tradition, and the hunter (as distinguished from the deer) by Greek tradition. Throughout the discussion, the treatment and application of Rig-Veda passages is far from being such as Western scholarship can approve ; and the same is the case with the final conclusion of the chapter, that "the three principal deities in the Hindu mythology can be traced to and located in this part of the heavens"—the trio being Vishnu, Rudra, and Prajāpati.

The sixth chapter, "Orion and his Belt," continues the same argument, and with evidences to which we must take equal exception. *Āgrahāyana* and its derivatives are again brought forward for explanation, and its *hāyana* is made out to come probably from *ayana*, with an indifferent *h* prefixed (for which various supporting facts are adduced, as *hinv* and *inv*) and the vowel lengthened ; and thus *āgrahāyaṇī* is identified with *āgrayaṇī*, the sacrifice of first fruits, while the latter is further on identified with the name Orion. The number of the planets is found to be "fixed at nine" (with anticipation, it is to be inferred, of the discovery of Uranus and Neptune), since there are nine *grahas* or 'dips' of liquid oblation at the sacrifice (the common name of a planet being also *graha*). The sacred thread of the Brahmans comes from Orion's belt as its prototype ; and the belt, staff, and antelope's skin of the Brahmanic pupil commencing his Vedic study go back equally to Orion's trappings. The chapter has no direct bearing upon the main question of the work, and these details are quoted only as illustrating the degree of the author's prepossession in favor of his theory of the immense importance of Orion. And the first part of

chapter VII., "Ribhus and Vrishākapi," is of the same character. It is suggested that the means—*turīyeṇa brahmaṇā* (RV. v. 40. 6), 'by the fourth prayer'—which the sage Atri employed successfully in bringing the eclipsed sun back into the sky, was perhaps a quadrant or some similar instrument. Planets are recognized in *bṛhaspati*, in *çukra* and *manthin*, and in *vena*, both *vena* and *çukra* (= *cypris*) being names of Venus—and so on. Then the principal part of the chapter is devoted to the discussion of a couple of obscure legends from the Rig-Veda. At i. 161. 13 we read thus: "Having slept, ye Ribhus, ye asked: 'Who, O Agohya, hath awakened us?' The he-goat declares the dog to be the awakener; in a year thus to-day have ye looked out (i. e. opened your eyes);" and iv. 33. 7 says that the Ribhus slept twelve days as guests with Agohya. If, now (as has been suggested also by others), the Ribhus are the divinities of the seasons (which is reconcilable with some of their described attributes, though by no means with all); and if Agohya, lit'ly 'the unconcealable one,' is the sun; and if the twelve days of recreation are the twelve that must be added to the lunar year to fill it out to a solar one (one, unfortunately, of 366 days, which neither Vedic tradition nor astronomy sanctions); and if "in a year" (*sāhvatsare*) means distinctly 'at the end of the year' (which might be if the sleep had been of a year's length, but is far less probable, if not impossible, supposing it to have been of twelve days only)—then the dog that roused them (or, at least, was accused of having done so by the he-goat, whom Mr. Tilak this time interprets to be the sun), presumably in order to recommence their duties at the beginning of a new year, may have been Canis Major (although this is nowhere called a dog in Hindu tradition, the Hindus, as we saw above, having lost that feature of the original Indo-European legend); and this would imply the sun's start upon his yearly round from a vernal equinox in the neighborhood of Orion, at four to five thousand years before Christ. Doubtless it will be generally held that a conclusion depending on so many uncertainties and improbabilities is no conclusion at all. If it were already proved by sound evidence that the Hindus began their year, at the period named, from an observed equinox at that point in the heavens, then the interpretation of the legend offered by our author might be viewed as an ingenious and somewhat plausible one; but such an interpretation of such a legend is far too weak a foundation to build any belief upon.

As for the Vrishākapi hymn (RV. x. 86), the use made of it in the chapter seems utterly fanciful and unwarranted. Of all who have attempted to bring sense out of that strange and obscure passage of the Rig-Veda, no one is less to be congratulated on his success than Mr. Tilak. His discussion of it is only to be paralleled with the endeavor to extract sunbeams from cucumbers, and does not in the least call for examination or criticism in detail. Nor need we spend any words upon the final chapter, "Conclusions," in which the theories and suggestions of the work are gathered and presented anew, without added evidences, in their naked implausibility. Our own conclusion must be that the argument is wholly unacceptable, and that nothing has been brought forward, either by him or by Jacobi, that has force to change the hitherto current views of Hindu antiquity.

6. On the third volume of Eggeling's translation of the Çatapatha-Brāhmaṇa, with remarks on "soma = the moon"; by Professor Whitney.

Having presented to the Society (see Proceedings for October, 1882, and for October, 1888: Journal, vol. xi., p. cxxxiv; and vol. xiv., p. vi) criticisms on the first and second volumes of Eggeling's translation, I feel called upon not to let the third pass without a few words of notice. It brings us to the middle of the Brāhmaṇa, and counts as vol. xli. of the Sacred Books of the East. When that series comes to an end (if it ever does), it is to be hoped that some provision will be made for the completion of this extremely important work; that it should be left a fragment would be the greatest pity, and little to the credit of those who are responsible for the planning and carrying out of the enterprise.

The volume contains three of the fourteen books constituting the Brāhmaṇa. Book v. concludes the exposition of the regular soma-sacrifices, being chiefly occupied with the *vājapeya* and *rājasūya* ceremonies, and, at the end, with the *sāutrāmaṇī*; on these, Weber has lately published important monographs.* Then books vi. and vii. give the first part of the interminable discussion of the *agnicayana*, or building-up of a fire-altar out of specially prepared bricks and other objects: something quite apart from the general order of Vedic rites, and apparently of comparatively modern origin; and, as Weber points out in his detailed description of the ceremony in the *Indische Studien* (xiii. 217 ff.), the language of the Brāhmaṇa here takes on certain peculiarities, as if this part were from another hand or another school than that which produced the preceding books.

That the volume is, upon the whole, an industrious and instructive piece of work, a trustworthy representative of its original, and supported by notes generally valuable and helpful, is a matter of course. It is, as ought to be the case, perceptibly superior to its predecessors; the occasional striking misapprehensions of meaning which had to be pointed out in them are here hardly to be found—whether from absence of occasion of their occurrence, or because the translator has learned much by experience; for it does not appear that he has been willing now, any more than hitherto, to submit his version to a careful and searching revision. The lack of this is indicated by the not very rare omissions of words or phrases or sentences of the original (toward fifty such cases have been noted): sometimes (as in v. 3. 3. 10; vi. 2. 1. 7; 3. 3. 14; 6. 2. 7; 7. 2. 2; vii. 1. 1. 7; 3. 2. 10; 5. 2. 38) he skips from one occurrence of a word to a later one, losing what intervenes, to the extent even of a line or more; but usually only a word or two is let slip (examples are: *mahate* twice, v. 3. 3. 12, and repeated at v. 4. 2. 3; *giras*, v. 4. 1. 9; *itare*, v. 4. 2. 1; *yuṣmās*, vi. 4. 4. 16; *vittam*, vi. 6. 2. 4; *riktas*, vii. 1. 2. 9; *saṃvatsare*, vii. 1. 2. 11), or even a part of a word

* *Ueber den Vājapeya*, in Sitzungsab. d. k. Preuss. Akad. d. Wiss. for 1892, p. 765 ff., and *Ueber die Königsweihe, den Rājasūya*, in Abhandl. do. do. for 1893.

(as *-stomam*, v. 1. 3. 1; *a-*, v. 5. 4. 33, turning the negative statement into a positive). The same carelessness is shown in certain uncorrected errata: e. g., *shed* for *sheds* (du.), v. 2. 1. 23; *lord* for *lords*, v. 3. 3. 11; *hip* for *hips* (du.) vii. 5. 1. 35; *seed* once (vi. 4. 3. 2) for *seat* and once (vii. 3. 1. 36) for *sand*; *head* (vi. 5. 4. 16) for *heat*; *substance* for *sustenance* (*ūrj*: vi. 7. 3. 3); *saline salt* for *saline soil*, vii. 1. 1. 7; *worship* for *worshiper* (*dācṣvāṇs*: vii. 3. 1. 29).

That the translator takes rather lightly his task of turning the Brāhmaṇa into English may be instructively shown by a notable example out of his second volume. There is a certain combination of a root with prefixes, *mad* with *upa + ni*, which occurs (so far as known) only three times in the language, all in the third and fourth books of this Brāhmaṇa; and upon their interpretation depends in no small degree the important question whether a second root *mad* requires to be recognized. On turning to see what are the views of Professor Eggeling upon this point, we find that once (iii. 7. 3. 11) he renders the verb in question by "quiet them" (impv.), once again (iv. 3. 2. 4) by "he quickens," and the last time (iv. 6. 9. 6) by "he encourages"—in each case, plainly without any apprehension of the points involved, or any consciousness of the other two cases; and also without any reference to the Petersburg Lexicon, whose interpretation is quite different. After making this experience, one feels that he cannot regard the author's translation of any critical word or phrase as expressing his deliberate opinion of its meaning, because one cannot be certain that it attracted his serious attention.

So, further, when we find a word rendered in a great variety of different ways, it is presumably because the translator did not think it worth while to take the trouble to be consistent. A fair degree of consistency in such matters appears to me to be demanded in order to represent faithfully such a text; the Brāhmaṇa is not so much a literary monument as a technical treatise, of which the accordances and differences of expression have their decided value. For example, in books vi. and vii. the verb *upa-dhā*, lit'ly 'put to,' is in constant use to signify the addition or laying on or putting in of the bricks etc. that compose the fire-altar. As such it ought, in my opinion, to have a constant representative, departed from only under stress, and with notification of the departure. But the translator, for no discoverable reason more serious than the attainment of a pleasing variety of expression, renders it with a great number of discordant phrases: for example (for doubtless some have escaped my notice), pile up, build up, fill up, put on, place on, lay on, put in, put down, lay down, set down; and also bestow (e. g. p. 333), give (396), endow (380): these last being fairly to be called mistranslations, as they import into the term some thing which it does not itself contain. So, again, at v. 3. 4. 3 ff., the verb *grah* is used formally, nineteen times in succession, of the 'taking' or 'dipping' of various kinds of water as ingredients of a compound; in the majority of cases it is rendered "take," but in several also "catch," "catch up," "draw." For further examples we may quote: *ājya* sometimes "butter," sometimes "clarified butter," some-

times "ghee" (and *ghṛta*, which is the word *ghee*, then on the same page, 79, rendered "clarified butter"); *ud-yam*, repeated in two successive lines (p. 138), "aim" and "raise"; *nir-math* "churn out" and "kindle" (217); *açman* "rock" (147), "pebble" (148), and "stone" as distinguished from pebble (158); *rasa* "sap, essence, vital sap, vital essence"; *abhi-sic* "anoint" and "sprinkle," and declared (68 n.) to mean lit'ly "sprinkle," which is an error, since it signifies 'pour on'—and so on, in numberless cases of greater or less importance, many of them trivial in themselves, and worthy of notice only as they illustrate the loose habit of the translator, and his unwillingness to be governed by anything but the suggestion of the moment.

Certain minor errors, also mainly attributable to carelessness in revision, may be pointed out: *Prthin* instead of *Prthī* (p. 81); *Çunaḥ-çepha* instead of *-çepa* (95 n.); "Indra" for *āindra* (122), and "Varuṇa" for *vāruṇa* (405); "half-month" instead of 'half-year' for *ayana* (334); "lay on the ground" instead of 'fell' for *açīyanta* (380); "erect" for *rohati*, as if it were causative (22, and similarly 278), and *prati-sthā* also as causative (55); "over" instead of 'under' for *antara* (31-32); "may we obtain" for the aorist *āpāma* (100); *anupūrvam* rendered as if *anurūpam* (166); "bearded" for *tūpara* (173); "innocuous" for *anaçanāya* (305); "primeval" for *ṛtavya* (306); "skin" for *vapā* (347); "foam" for *abhra* (415)—and so on; the examples might be multiplied; nor is it possible to distinguish accurately between such cases and more serious misunderstandings; of the latter class are more distinctly "prosper" for *kṛp* (30, 107-8), "favor" for *anu-sac* (392), and so on. Then there are such unhappy selections of equivalents as "slaughter" for *ā-labh* (162 et al.), "rend asunder" for *ava-dṛ* (34 et al.), "cart" for *ratha* (138), "prayer" for *yajus* (155 et al.). On p. 348 (vii. 3. 1. 23) he fails to notice that the root *iṣ* as well as the adjective *mahant* goes to make up the artificial etymology of *mahiṣa*; and on p. 322 (vii. 2. 1. 11) it seems to escape him altogether that the forms of *nir-arpay* and *nir-ṛch* which are used are for the purpose of a play of words upon *nirṛti*. A somewhat similar case is at vii. 5. 1. 21, where he three times gives to *prāṇayat* the impossible meaning "breathed," not perceiving that only a pun is intended between it and *prāṇa*, and that it signifies 'he led forth' the breaths: the same pun is found also elsewhere (Praç. Up. iv. 3; JUB. iv. 18. 9). In a few instances the connection of the parts of a sentence seems to me wrongly apprehended: for example, at vi. 3. 1. 42, read rather "thereby it [is] gold; gold is immortal; the waters are immortal"; at vii. 1. 2. 19, rather "that is the *āhavanīya*, that the sky, that the head . . . that is the *gārhapatya*, that the foundation, that this world"; at vi. 1. 1. 9, "whatsoever there was here" belongs with "everything here"; at vii. 5. 1. 9, *sukṛtasya* qualifies *loke*: 'in the world of the well-done.'

A very notable oversight is committed at vi. 2. 2. 28, where, after speaking of the new moon, the text goes on to tell of what happens 'during the half-month of (her) increase' *āpūryamānapakṣe*, and the translator renders it "when his (Agni's second) wing is covered (with

loose soil)"! And the true sense of the antithesis between *adhīdevatam* and *adhyātmam* (239, 248, 270) seems to be misconceived by him. After identifying certain things or certain parts of things with sundry divinities (the grounds being usually as obscure as those for the identification of soma with the moon), the Brāhmaṇa says: "to this effect as regards the divinities; now as regards one's self (or, the self);" and then follows a similar (and similarly obscure) identification of them with members or faculties or operations of human beings; such is plainly the sense in each of the three passages cited here, as it is elsewhere; and the translator is quite mistaken in conjecturing and suggesting (in parenthesis) a connection of *adhyātmam* with Agni's "self" or body. I think him also plainly in error in translating the present passive participle as if it were perfect: *antayoḥ saṁskriyamāṇayoḥ* "after the two ends have been completed" (vii. 1. 2. 23: cf. also p. 314, note 2); it should be 'while the two ends are being completed.' At vi. 2. 3. 1 and several similar passages later, we are doubtless not to infer from his rendering *teṣāṁ cetayamānānām* by "whilst they were meditating" that he regards the expression as a genitive absolute; he is only giving a convenient and perfectly proper paraphrase of the literal meaning: 'of them, as they were meditating, Prajāpati' did so and so.

The translator still insists on viewing the pronoun *ayam* when applied to the wind as the equivalent of *asāu* and requiring to be represented by "yonder" ("the wind that blows yonder"). So, too, as in the preceding volume we have read of the sacrificer's "lady" (*patnī*), we now again, as result of a like spasmodic attempt to lift the style of the Brāhmaṇa up to a level with that of modern Society, meet with the "ladies" (*gnās*: vi. 5. 4. 7) of those elegant gentlemen the gods; and the *mahiṣī* (lit'ly 'she-buffalo,' but applied also to a chief wife) appears in the grandiloquent disguise of a "consecrated consort" (vi. 5. 3. 1 et al.)!

When the Brāhmaṇa gives only the first words (*pratīka*) of a quoted verse, or those severally of a series of verses, the translator once (p. 213) adds in a note the version of them complete; but in a considerable number of cases (pp. 75, 259, 279, 282, etc. etc.) he fills out the verse or verses in his text, without even intimating by brackets that he is making additions: surely the former was the better way, and should have been followed throughout; in such a work we have the right to know just what the Brāhmaṇa gives and what it does not give. Per contra, although he usually has the utmost patience with its interminable repetitions, reproducing them faithfully, there are a few passages (pp. 80 bis, 85, 193, 393) where he abbreviates, putting in a representative pronoun instead of the detail of his original—by a weakness that is to be regretted, for the reason just pleaded above.

It is, of course, not impossible that, in one and another of the points here brought to notice, the translator may be working upon a text different from that which the published edition of the Brāhmaṇa lays before us. But that cannot be regarded as relieving him of responsibility with regard to these very points. That he should report differ-

ences of reading, correcting the printed text where it requires correction, is what we have the right to expect of him. Weber's text is very carefully edited, and unusually accurate, and it will unquestionably be very long before we have another to put in its place; and no one has such an opportunity as a translator, equipped with additional manuscripts and with commentaries, to test every word in it. To my mind, it is the bounden duty of the translator, under such circumstances, to note and make known every error that he detects in the published text. Doubtless it is an added burden to do so; but it is one that counts for almost nothing in the sum of what he has undertaken, and also in comparison with what it would cost another if undertaken separately; and to leave it wholly untouched is little better than shirking.

At the end of his Introduction, the translator steps aside, as it were, to add the weight of his full approval and acceptance to Hillebrandt's recently published* views as to the relation between soma and the moon. It might have been more in place to mention Weber's comprehensive essays, referred to above (though that on the *rājasūya* was perhaps published too recently for such mention), on account of their direct bearing upon the contents of the volume. And Hillebrandt might himself have been more gratified if the translator, who had now been dealing with soma and soma-sacrifices through sundry hundreds of pages, had, instead of merely pronouncing a general formal approval, brought forward at least a single item to support the asserted relation, showing where it seemed to have been in the mind of the authors of the Brāhmaṇa, and where its recognition would aid our comprehension of their rules and expositions. Are we not perhaps justified in assuming that he would have been much puzzled to do so? and, in that case, what is the value to him of the new truth? Without some support of this kind, his recommendation is only an idle form.

But, even as form, it is open to serious objection. Professor Hillebrandt, it says, has "fully established . . . the identity of Soma with the Moon in early Vedic mythology." It is doubtless by an error of expression that Professor Eggeling seems to say here more and other than he means—or than Hillebrandt himself would claim. What he intends is rather that soma has been identified with the moon: which is a very different matter. If two things are identical, they are interchangeable without any (at least, considerable or essential) change of sense. On the other hand, objects that are very different may have had an identical origin; and objects originally very different may come to be to a greater or less extent identified. And the Vedic Hindus have a perfect rage for identifications of things the most diverse; the volume before us, for example, teems with them, on almost every page. I open it at a venture, and I read: "[Agni] Vāiṣvānara truly is the year, and Prajāpati is the year" (p. 57); and every student of the Brāhmaṇas

* *Vedische Mythologie* von Alfred Hillebrandt. Erster Band. Soma und verwandte Götter. Breslau, 1891.

knows how it is elsewhere insisted on, with endless iteration, that Prajāpati and the year and the sacrifice are all one ; accordingly, as the translator, to be consistent, would have to maintain, " this fully establishes the identity of Agni Vāiṣvānara and Prajāpati and the year and the sacrifice in early Vedic mythology." Yet we know that they are four quite independent and discordant entities, and that to replace one of them by any one of the others in a given passage would be a very dangerous proceeding, justifiable only by a careful examination and convincing exposition of the reasons for it in the particular case. Is it otherwise than this with soma and the moon? *Soma* is, as all acknowledge, a derivative from the root *su* 'press out,' and means literally 'extract'; and all its primary uses are in accordance with this : a certain juicy plant is gathered on the mountains, and—at the time of the Brāhmaṇas, with infinite ceremony ; earlier, doubtless quite simply—pounded and pressed, and the exuding liquid caught and filtered, mixed with certain added ingredients, and then drunk ; and sometimes, when one drinks too much of it, the result is unfortunate ; it comes out of him again by vomiting and purging, and the unhappy drinker has to submit to remedial or expiatory treatment. All this, now, according to the letter of Professor Eggeling's attestation, is true likewise of the moon ! The absurdity of such an allegation is apparent to the dimmest eyes. But the hypothesis of original identity and later differentiation is equally excluded by the circumstances of the case. There remains as a possibility only the theory of secondary identification ; and, in spite of our experience that the Hindus are ready, without apparent justification, to identify almost anything with almost anything else, we should regard this as incredible if it were not also incontestable ; as every Sanskrit scholar knows, it is not buried in theosophical treatises only ; it has spread into general usage, so that *soma* has come to be frequent among the many moon-names, and the two things have various appellations in common ; although none of the really distinctive names of the moon, like *candramas*, is made a title of the drink soma.

Such being the condition of things, its investigation has two parts : first, what is the basis of the identification ? what likeness or analogy suggested it at the beginning, and what others supported and maintained it, giving it finally such general acceptance ? and, second, how early is it, and how pervading, and of what degree of importance in determining the view and treatment of the two things identified, in different writings and classes of writings ? As for the first of these two divisions of the subject, Hillebrandt does not deem it worthy of the smallest attention ; for all that he says about it, he might himself be a Hindu, and regard as quite natural and to be expected that a mild intoxicant and the queen of night should become mixed up with one another, to the partial loss of their separate identity. Herein lies, in my opinion, the weakness of Hillebrandt's work ; the question of basis is not one of curious historical interest only ; its answer must have an important practical bearing upon those involved in the other division. The latter are essentially questions of more and less ; possibly, Sanskrit scholars in general have not recognized enough of the element of

lunacy in the ecstatic soma-hymns ; but also its presence in the measure claimed for it seems far from likely to be demonstrated. A considerable part of the author's reasoning seems to me to be underlain by this argument : it is very strange that the moon makes so small a figure in Hindu mythology and ceremony ; on the other hand, it is strange that the drink soma should have been raised to such prominence as a divinity ; hence, by a union of soma and the moon, the two unexplainables may be made in a manner to explain one another. I am not at all satisfied that their combination is an admissible one, or that the exaltation of soma is not sufficiently accounted for by its own merits ; but I should reserve a confident opinion on such points till after a more thorough examination and consideration, on my own part and on that of others. Meanwhile, I cannot regard any facile endorsement like that of Professor Eggeling as contributing perceptibly to the decision of the question.

7. Transitive and intransitive verbs in Semitic ; by Professor Paul Haupt, of Johns Hopkins University, Baltimore, Md.

The following is an abstract of this paper, which will be published in full in the *American Journal of Philology*.

The difference between the so-called transitive and intransitive verbs in Semitic is not that the first class requires an object to complete the sense while the verbs of the second class express an action or state that is limited to the agent or subject ; the distinctive features of the two groups are rather that the so-called transitive verbs express an action dependent upon the will of the subject, while the so-called intransitive verbs originally express an action or state not dependent upon the will of the subject, but beyond the control of the individual in question. Consequently it would be better to call them intentional and unintentional verbs : or, if a Latin term be preferred, *verba voluntaria et involuntaria*.

French *entendre* 'hear' (Arabic *sámi'a*) would be in Semitic an unintentional verb ; you often hear things which you do not want to hear. If you hear a paper, for instance, on transitive and intransitive verbs in Semitic, *hear* is a *verbum involuntarium*. The corresponding *verbum voluntarium* is *écouter*, 'listen,' Heb. *hiqšibh*, or *hā'zín*, or *hiṭṭāh ōzēn*—all causative stems meaning 'give ear.' The same difference exists between Assyrian *amāru* 'see' and *dagālu* 'look at.' *I see* in Semitic really means 'my eyes were struck with the sight ;' the Arabic *rá'a* 'see' has therefore the characteristic semipassive vowel *a* in the imperfect, while the corresponding *verbum voluntarium* 'look at' is again expressed by causative stems in Hebrew : *hibbīṭ*, or *hišqīf*.

After this explanation, the involuntary or semipassive nature of the verbs *hate*, *love*, *fear* will be apparent. If *to ride a horse* is treated as a *verbum involuntarium*, it would seem as if the equestrian skill of the primitive Semites could not have been very great. Any one who has seen a man without any experience in horsemanship on the back of

a spirited steed will appreciate the semipassive vowel *a* in *irkab* 'he rides.' It is interesting to note in this connection that the Hebrew expression for *he dismounted* is 'he fell from the horse.' *Irkab* 'he rides' means simply 'he was carried;' the *verbum voluntarium* would be 'he manages a horse as an equestrian' (يروض). *Ilmad* 'he learns' means really 'he is taught a lesson;' the lesson is hammered into him. It is characteristic that the nominal derivative of *ilmad* 'he learns,' the noun *malmâdh*, with prefixed *m instrumentale*, means not exactly 'instrument of learning,' but 'ox-goad.'

8. The Origin of the Pentateuch ; by Professor Haupt.

An abstract of this paper, which will appear in full elsewhere, is as follows :

The question has never been raised "why is the Hexateuch a composite structure? why did not the final editor re-write the whole matter in his own language? why were the older sources quoted in full with all their phraseological peculiarities as well as internal contradictions and incongruities, different accounts of one and the same event which mutually exclude one another?"

The only satisfactory theory explaining the origin of the Pentateuch, it seems to me, is that the pre-existing documents were incorporated because they could not be suppressed. The only thing the priestly editors could do in certain cases was to give objectionable traditional stories a parenthetic setting emphasizing the spiritual lessons deducible from them. The church followed a similar policy in dealing with the heathen festivals of our Germanic ancestors : as the Christian priests found it impossible to abolish the ancient pagan rites, they endeavored to infuse Christian ideas into them.

The church has always connived at certain things, making concessions to popular prejudices ; and this has been a wise policy. A compromise is always better than a revolution or radical reformation. The failure of Ezra's first attempt at reformation immediately after his arrival in Jerusalem was probably due to the fact that he hoped to make the abstract system of P,* without the popular JED,* the canonical book of the post-exilic congregation. The law which Ezra brought from Babylonia in 458 was P (including H) ;* but the Torah which was proclaimed 14 years later, at the great public meeting convened by Nehemiah in 444, must have been P+JED combined : that is, practically our present Hexateuch (excepting later strata of P). It is not impossible that the combination of JED and P was effected under the influence of Nehemiah, who, being a courtier and a diplomat, was probably more in touch with the feelings of the people than the school

* For the explanation of these symbols consult the index to Driver's *Introduction to the Literature of the O. T.*

of priests who had systematized the legal precepts of P in Babylonia* about 500 B. C. The haggadic elements of JE were necessary to clothe the halachic skeleton of P with flesh and blood. The prosaic legal framework of P, without the picturesque narratives of JE, was not adapted to the common people, and the combination of JED with P was the best way to counteract the effect of JE, which was too popular to be suppressed.

The Book of Joshua must have been cut off from the Hexateuch after the Torah had been proclaimed as the standard of the restored community in 444; and this separation was evidently made with the aim to emphasize the Mosaic origin of the Law. Certain elements of JE were no doubt eliminated, especially those that were at variance with P, but this process was most probably a gradual one: objectionable passages were pruned away or modified in the course of time; on the other hand, it became necessary subsequently to re-insert certain sections which had originally been excluded from the Deuteronomistic redaction of the historical books.

9. The Rivers of Paradise; by Professor Haupt.

The full text of this paper will be published elsewhere; the following is a brief abstract.

Gen. ii. 10-14 represents a subsequent insertion, written about 640 B. C. To expect an accurate geographical description of a distant region at such a date would be as unreasonable as the attempt to harmonize the account of creation given in the beginning of the Bible with the latest results of modern science.

The fourth and the third of the rivers mentioned are perfectly clear: the Euphrates and the Hiddekel, or Tigris, which flows east of Mesopotamia. The second, Gihon, must be a river originating from the same source as the Euphrates and Tigris, and afterwards flowing around the whole country of Cush, or Ethiopia. Of course, there is no such river; but if we remember that Alexander the Great thought at first that the sources of the Nile were in northwestern India (Arrian iv. 1; Strabo, § 696), there can be no doubt that the Hebrew narrator intended the Gihon for the imaginary upper course of the Nile in the Asiatic region east of the Tigris, as well as in the supposed eastern projection of Africa† joining eastern Asia.

The first river, the Pison,‡ is in the extreme east, most distant from

* P is influenced by Babylonian institutions; we can trace the Babylonian prototypes not only for certain Jewish rites, but also for certain technical terms of the Levitic priestly language. The term *qorbân* 'gift' or 'offering' is a Babylonian loan-word; the euphemism "clean place" for "dumping ground" (Lev. iv. 12; vi. 11) is also found in the cuneiform incantations (iv. R². 8, 43; 14, no. 2, rev. 2).

† See e.g. the maps illustrating the growth of our geographical knowledge in W. Sievers' *Asien* (Leipzig und Berlin, 1892), p. 5.

‡ For the form *pîšôn* instead of **pûšôn*, see Barth's *Nominalbildung*, i. (Leipzig, 1889), p. xxix below.

the Palestinian writer. It is, therefore, mentioned first, and described more minutely. Not only the district around which it flows is mentioned, but also the products of that region : pure gold, bdellium,* and *shoham* stones, or pearls (Assyr. *sāndu*,† properly the 'gray gem'). *Ḥavilāh*, i. e. the 'sandy region,' is the old Hebrew name for the Arabian peninsula (with the exception of northern‡ Arabia); and the Pison, i. e. 'the broad stream,' flowing around *Ḥavilāh*, can be nothing but the Persian Gulf and the Red Sea. The Hebrew narrator thought that the Persian Gulf and the Red Sea formed one "broad river," flowing around Arabia,§ but originating from the same source as the Euphrates and Tigris.

We may safely assume that the Palestinian writer fancied the Persian Gulf and the Red Sea to be much narrower than they are, and he may have believed that the *yām-sûf* or 'Weedy Sea,' i. e. the Gulf of Suez (and the Gulf of Akaba), was much larger. It would not be surprising if he had looked upon the *yām-sûf*, or Weedy Sea, as the sea into which the Pison, i. e. the Red Sea and the Persian Gulf, emptied. A study of medieval maps will show that such an idea is by no means impossible. Besides, we must remember that the Assyrians called the Persian Gulf *nāru marratu* 'the bitter, or salt-water river.' The name is also applied to the universal sea, imagined as a broad circular stream surrounding Babylonia,|| just as Homer called the ocean encircling the disc of the earth *ποταμός*. There is no sharp distinction between river and sea in Semitic; and maps on which the various rivers and seas appear in their proper proportions are quite modern.

* This is the gum resin of the *balsamodendron mukul*, which is often found mixed with myrrh. It is not impossible that Heb. *bēdhōlah* is an older name for myrrh, as suggested by Delitzsch (*Paradies*, p. 132). We may find a cuneiform name *bidalluxu* or *bitalluxu* some day; the *d* is probably due to a partial assimilation of the infixed *t* to the initial *b*.

† See Meissner-Rost, *Bauinschriften Sanherib's* (Leipzig, 1893), p. 25, 30; *sān-dāniš* (Sarg. Cyl. 21) means 'like a pearl-diver' (غواص).

‡ Cf. H. Winckler, *Alttestamentliche Untersuchungen* (Leipzig, 1892), p. 146, n. 2.

§ If the Gihon is the Nile, and the Pison the Persian Gulf and the Red Sea, then the upper course of the Gihon would naturally be further east than the Pison, unless we are ready to admit that the Hebrew narrator fancied that *Ḥavilāh*, which is washed by both the Persian Gulf and the Red Sea, was situated west of the Nile. In a diagram exhibiting the vague geographical notions of the Hebrew narrator, it will be best to make the Pison the second river. This confusion does not surprise me at all. I have come across several students of Assyriology who did not know exactly whether the east river of Mesopotamia was the Euphrates or the Tigris. If they do these things in a green tree, what shall be done in the dry? Besides, we must bear in mind that the lower course of the Pison, i. e. the Red Sea, is east of the lower course of the Gihon, i. e. the Nile.

|| See the Babylonian map published ZA. iv. 369: cf. vi. 175.

Of the mouth of the Euphrates and Tigris the Palestinian writer evidently had no accurate knowledge.* He certainly did not think that they emptied into the Persian Gulf, which he considered a part of the Pison. If he troubled himself at all about the question, he may have fancied that they disappeared in the swamps of southern Babylonia, just as the great Arabic geographers, who had a much better knowledge of the valley of the Euphrates and Tigris, believed that the Euphrates emptied into the swamps (تصبّ في البطائح) southwest of Babylon.†

10. On two passages of the Chaldean Flood-tablet; by Professor Haupt.

The goddess Ištar exclaims in ll. 123 and 124 of the Chaldean Flood-tablet: *anākū-ma ullada nišū'ā-ma kī māre nāne umallā tāmtā-ma.*‡ I translated the passage in 1881 (sic!), in my commentary on the cuneiform account of the Deluge printed in the second edition of Professor E. Schrader's *Cuneiform Inscriptions and the Old Testament* (KAT. 2 63. 15): 'I do not bear my people that they should fill the sea like fish-spawn.'§ Delitzsch, in his great *Assyrian Dictionary* (p. 329 below), adopted my translation; but Professor Peter Jensen, of Marburg, in his *Cosmology of the Babylonians* (Strassburg, 1890), p. 419, remarks: "it is true, *ā* may mean 'not,' but only in prohibitive clauses, and not at the end of such sentences" (against Delitzsch, *Assyr. Gramm.*, p. 215).

* Delitzsch (*Paradies*, p. 177) says: Ich gehe wohl nicht zu weit wenn ich behaupte, dass sich nur die Wenigsten bisher ein klares Bild vom Mündungsgebiete des Euphrat und Tigris gemacht haben.

† See the map of the 'Irāq in the Gotha MS. (written 1173 A. D.) of el-Iṣṭakhrī (c. 950), reproduced in Aug. Müller's *Der Islam im Morgen- und Abendland* (Berlin, 1885), i. 576; and compare Reinaud's *Géographie d'Aboulféda* (Paris, 1848), ii. 1: pp. 54, n. 1; 65, n. 1. Also on the Babylonian map mentioned above the Euphrates empties into the *apparu*, or swamp (ZA. iv. 367). Pliny (v. 26, sec. 90) says: Scinditur Euphrates a Zeugmate DLXXXIII milibus passuum circa vicem Massicen, et parte læva in Mesopotamiam vadit per ipsam Seleuciam, circa eam præfluenti infusus Tigri; dexteriore autem alveo Babylonem quondam Chaldææ caput petit, mediamque permeans, item quam Mothrin vocant, distrahitur in paludes.

‡ I stated in my paper *On a modern reproduction of the eleventh tablet of the Babylonian Nimrod Epic*, printed in these Proceedings for April, 1893. p. xi, note ||, that we seemed to have a masculine form *tamma* instead of *tāmtu* or *tāmdu* 'sea' in l. 123 of the Deluge text; but that I thought it should be read *udma*=Heb. *ādāmāh* 'land.' Some Assyriologists may feel inclined to combine *tamma* with the Arabic طم 'sea.'

§ Ich aber gebäre die Menschen nicht dazu dass sie wie Fischbrut das Meer füllen.

This strange statement is characteristic of certain polemical remarks of Jensen's aimed at Delitzsch and myself: in order to be able to correct what he imagines to be our mistakes, he is obliged to distort the facts, and impute to us a blunder we never dreamed of. That is, of course, highly flattering for both Delitzsch and myself. Neither of us ever thought of combining *â-ma* (cf. Heb. *âl-nâ*)* with the preceding clause. In my commentary of 1881, as well as in Delitzsch's lexicon, it is evident that we connect the negative particle with the following line. The position of the *â* at the end of the preceding line would be the same as in the last line of the Esarhaddon cylinder, i. R. 47, 56: i. e. Esarh. vi. 56 (=KB. ii. 150: cf. Abel Winckler, *Keilschrifttexte*, Berlin, 1890, p. 24 below).

Now I do not any longer believe that my former translation of the passage is correct, although it has been followed by so great an Assyriologist as Delitzsch (I shall state presently how the lines must be explained); but my interpretation proposed in 1881 is certainly better than Jensen's rendering (*Cosmol.*, 429): "what I bore—where is it?" A beginner could tell Professor Jensen that this would be in Assyrian *šâ ûlîdu ânu šû* (or *šî*), not *anakumma ulladina šû atama*. *Ullada* is present or future, not imperfect or preterit; and for the benefit of the goddess Ištar it might be better to take *ullada* as the present of the Piel: *ullada*=**uwallada*: cf. *uddaš*=**vaddaš*, *uhaddaš* 'I renew,' *ubbat*=**vabbat* 'I destroy,' etc. It is enough for Ištar to be the *mu'allidat* (or *muštēširat*), the divine midwife or superintendent of the birth of the post-diluvian race; she could not well be the *âlidat gimir nabnîti ša arki abûbi*, the real mother or *generatrix*.

For the synonym of *mu'allidat* see my ASKT. 116. 10: cf. *ibid.* 85. 40. The stem is not *yuššuru* 'direct' (cf. Corân, sura 80, v. 20) but *uššuru* with *šs*†= *muššuru* (*Beitr. z. Assyriol.* i. 98 n.) 'deliver' (that is 'liberate,' 'save,' or 'surrender,' or 'communicate,' or 'relieve of a child in childbirth,' etc.): i. e. Arabic *māsara* (= *sālla wastāwraja*): cf. my *Beitr. z. assyriol. Lautlehre*, Göttingen, 1883, p. 91, n. 2). We find the same stem in post-Biblical Hebrew (see Levy, vol. iii., p. 117^a, no. 3), and the term Masora must be derived from it (*contra* Lagarde, *Mittheil.* i. 94): see

* See the abstract of my paper on the Hebrew particle *-nâ* in the *Johns Hopkins University Circulars*, No. 112, May, 1894.

† In the prospectus just issued of the *Assyrisch-Englisch-Deutsches Glossar*, herausgegeben von W. Muss-Arnolt (the title is cautiously worded), it is stated: "Ein *šs* und *šs* für ursprüngliches Anfangs-*m* und *-n*: e. g. *itaphusu* für *nitaphusu* anzusetzen, wie es im Jahre 1887 in der Ankündigung des von dem *Semitic Seminary of the Johns Hopkins University* (Baltimore, Mt. [sic!]) versprochenen Glossars proponiert wurde (vergleiche *Proceedings of the American oriental society*, vol. xiii., p. xlv ff.), war keine Ursache vorhanden."

As this is the only reference to the Johns Hopkins University in the Prospectus of Dr. W. Muss-Arnolt's Glossary, it may be well to place here side by side some extracts from Dr. Arnolt's prospectus and from the *Announcement of a New Assyrian-Glossary, presented on behalf of the Semitic Seminary of the Johns*

Strack in Herzog's *Realencyklopädie*, ix. 388, and cf. König, *Einleit. in das A. T.* (Bonn, 1893), p. 38. The ἀπαξ λεγόμενον *wayyimmāsērā*, Num. xxxi. 5, means 'they were sent forth.' Assy. *muššuru* is a synonym of Heb. *šillāh* (cf. Lev. xiv. 7, 53; Deut. xxii. 7; and II. 147, 150, 153 of the Flood-tablet). The Nifal *nimsār* has the same meaning as the Pual *šullāh*, Prov. xvii. 11.

Hopkins University, by Mr. Edgar P. Allen, of the Johns Hopkins University (A. O. S. Proc. at Baltimore, Oct. 1887, p. ccxlvii), one year before Dr. Muss-Arnolt became a member of the Assyrian Seminary of that University :

Chicago, 1894.

Um jedoch die Auffindung solcher Derivate, namentlich von schwachen Stämmen, zu erleichtern, sind alle Wörter auch in alphabetischer Ordnung mit Angabe des Verbalstammes, zu dem sie gehören, verzeichnet.

Diese Anordnung hat zwei wesentliche Vorzüge für sich. Zum ersten bietet sie einen Ueberblick dar über die Klasse von Wörtern, die zwar mit denselben Präfixen versehen sind Ausserdem erweist sich dadurch die relative Frequenz gewisser Wortbildungen. Speciell bequeme, wie schon gesagt, ist diese Anordnung für Wörter, deren Ableitung eine noch bestrittene Sache ist.

Die Stämme sind in der Regel in hebräischen Buchstaben gegeben. Hebräische und syrische Wörter sind in hebräischer Schrift citiert, äthiopische in lateinischer Transcription.

Die Anordnung der Consonanten ist die von Haupt und Delitzsch in ihren Werken befolgte. Alle Anfangsgutturalen werden unter **℣** behandelt e. g. *abu* , *alaku* 'gehen,' *alibu* 'süsse Milch,' *agrabu* 'Skorpion,' *aribu* 'Rabe'

Baltimore, 1887.

But, in order to facilitate the finding of words, especially of derivatives from feeble stems, all words will be cited also in alphabetical order, with appended references to their stems.

This arrangement has two advantages : a survey will thereby be obtained of classes of words formed by the same prefix, and also an idea of the relative frequency of certain formations; it will, besides, be especially convenient for words whose stems are a matter of doubt.

The stems will be expressed in Hebrew letters. . . . Hebrew and Syriac words cited will be written in Hebrew, . . . while . . . Ethiopic . . . will be transliterated in Roman characters.

The arrangement of consonants will be according to the system first indicated by Professor Haupt, and followed by Delitzsch in his Dictionary: that is, all initial gutturals will be cited under **℣** . . . for example *abu* 'father,' *alāku* 'go,' *alibu* 'milk,' *agrabu* 'scorpion,' and *aribu* 'raven.'

I deem it unnecessary to add a word of comment. As soon as Dr. W. Muss-Arnolt's glossary is published, I shall review it in a special paper, in which I shall also discuss the history of the work and Dr. Muss-Arnolt's card-catalogue or rather collection of slips.

The correct rendering of the two lines 123 and 124 of the Deluge-text is : "I will raise my people again, though they fill the sea like fish-spawn." Dr. Muss-Arnolt has published my explanation in what he calls a revised translation of the Chaldean account of the Deluge (l. 116), published in the *Chicago Biblical World* (Chicago, 1894), iii. 109-118. Dr. Muss-Arnolt, however, appears to have misunderstood my philological reasons for this translation ; he seems to think that the *kî* at the beginning of the second line (NE. 108. 15 ; 128. 1) is a concessive conjunction, like the Heb. *kî* in such passages as Eccl. iv. 14, כִּי מִבֵּית צֵא 'though he may come from a family of outcasts,' paraphrased by the following explanatory gloss :* כִּי גַם בְּמַלְכוּתוֹ נֹלַךְ 'though he may have been poor in (what subsequently became) his kingdom.' *kî*, of course, in *kî mâre nûne* can only be the *kaph similitudinis*. Dr. Muss-Arnolt's rendering of *kî mâre nûne*, "although like the spawn of the fishes," would be on a par with Jules Oppert's translation of the fourth line of the Flood-tablet : *u atta ul šanâta*,† "the number of thy years does not change;" where *šanâta* is made to express both years and change (see *Johns Hopkins University Circulars*, Feb. 1889, No. 69, p. 17 a). *kî mâre nûne umallâ tâmtâ-ma* is a concessive circumstantial clause (Gesenius-Kautzsch (25), §160), introduced by the enclitic *-ma* 'and' appended to *nišû'â* : cf. Heb. *wě-* in passages like Gen. xviii. 27 ; xxvi. 27 ; Is. xxxiii. 1 ; Jer. xiv. 15 ; 44. 18 : l. 17, etc.). In an accurate rendering of the Deluge-text the concessive particle "although" must appear at the end of l. 123, not as the beginning of l. 124.

Now this question arises : can we take *nišû'â-mâ* as the noun *nišû* with the suffix of the first person followed by the enclitic *-ma* ? George Smith understood it so (*Records of the Past*, vii. 139, 14), and this interpretation is certainly favored by the fact that there is no space between *nišû* and *â-ma* on the original (cf. *Beitr. z. Assyriol.* i. 132, n. ;† NE. 108, n. 7). The form *nišû'â* is not exceptional ; it is a form like *abû'â* 'my father,' *šepû'â* 'my foot,' etc. The singular *nišû* is used because the goddess speaks of the post-diluvian race : *nišû'â* means 'my race,' the plural *nišê'â* would mean 'my races,' which would be less appropriate in this connection. It took some time, of course, before the post-diluvian race could develop into *niše* or different races.

The length of the *a*-vowel of the suffix is preserved under the influence of the enclitic *-ma*. The original form of the possessive suffix of

* Cf. the abstract of my paper *On the Book of Ecclesiastes*, in the *Johns Hopkins University Circulars*, No. 90 (June, 1891), p. 115 a below, note *.

† The overlapping *-a* is found especially in the permansive forms of the *verba tertie infirmæ*. The language tries to strengthen these forms as much as possible: cf. the feminine termination in the forms of the infinite construct in the verbs *tertiæ* in Hebrew, etc.

‡ My remark, *Beitr. z. Assyriol.* i. 132, was known to Jensen, and should have prevented him from reading *ulladani šâa iama*.

the first person sing. was *-yâ*, with a long final vowel : cf. Arabic pause forms, as *'abdiyâ* (عبدية or عبديا) 'my servant' (Kosegarten, §1016, p. 444 ; Ewald, *Gramm. arab.* §367 ; Caspari-Müller, §36, note d).^{*} We find the same lengthening in l. 41 of the Deluge (NE. 136) : *ina qaggar Bel ul ašâkan rešî'â-ma* (or *pânî'a*) 'on the ground of Bel (that is, *terra firma*) I cannot resist (the Flood).' The passage has been very incorrectly translated. Dr. Muss-Arnolt (l. c., l. 33) renders : "On Bel's earth I dare not live securely," following Jensen's and Jeremias's erroneous interpretation : "will auf Bel's Ort mein Haupt nicht mehr niederlegen." Dr. Meissner, perhaps the ablest representative of the younger German school of Assyriology, translated (ZA. iii. 418 ; cf. BA. i. 320, *ad* p. 122) : "nicht werde ich meinen Geist auf Bel's Erde richten." *Šakânu ša rešî*, however, means nothing but 'resist,'† literally 'make head,' like our English idiom. Parnell, for example, said in his manifesto to the Irish people of America (March 13, '91) : "without your aid Ireland could not for one moment have made head against her oppressors." We find the same phrase in NE. 51. 17 : *šalaltî šanâtî âl Uruk lamû nakru, Ištar ana nakrišu ul išâkan qagqadsa* 'three years was the enemy besieging the city of Erech ; the goddess Ištar could no longer resist its (Erech's) enemies.'

Another form like *rešî'â-ma* 'my head' is *çuxrî'â-ma* 'my youth,' in l. 299 of the eleventh tablet of the Gilgamesh legends (NE. 147) : *anâku lûkul-ma lûtîr ana ša† çuxrî'â-ma* 'I will eat it§ and become again as I was in my youth.'

For the long *-â* before the enclitic *-ma* cf. also Delitzsch's *Assyrian Grammar*, p. 128 ; Jäger's inaugural dissertation, p. 12, n.* = *Beitr. z. Assyrl.* i. 453. We find the long *â* also without the *-ma* : Professor Bezold gives a number of passages in his transliteration of the el-Amarna texts in the British Museum, published under the misleading title *Oriental Diplomacy* (London, 1893, pp. 68, 70, sub *abu* 'father' and *axu* 'brother') ; and Professor Zimmern has some in his translation of the cuneiform letters from Jerusalem (ZA. v. 150. 7, 11 ; 152. 22, 5, etc.). Professor Bezold's reading, *abû'ai*, is certainly wrong (cf. Bezold's remarks, l. c. § 3). Nor do I believe (with Jensen, ZA. v. 100) that *a-bu-u-a-a* was pronounced *abûya*.

* Compare the abstract of my paper on the possessive suffix of the first person singular in Assyrian, in the *Johns Hopkins University Circulars*, May, 1894.

† It is not a synonym of *našû ša rešî*, as Meissner (*Altbabyl. Privatrecht*, p. 138) supposes : cf. note 29 of my paper *On the Book of Ecclesiastes*, in the *Philadelphia Oriental Studies* (Philadelphia, 1894).

‡ For the use of the relative pronoun *ša* in this connection cf. Dr. Krætzschmar's paper in *Beitr. z. Assyrl.* i. 358 below.

§ The magical plant whose name is : "a man, though gray-haired, became young again," Assyrl. *šumša šibu iççaxir amelu* : cf. Alfred Jeremias, *Vorstellungen vom Leben nach dem Tode*, Leipzig, 1887, p. 93.


Cases where the enclitic *-ma* is appended to the suffix of the first person without *scriptio plena* of the preceding final *a*-vowel of the possessive suffix of the first person sing. are quite common; we find several instances in the inscriptions of Tiglathpileser I. (cf. Lotz, 118), in the annals of Assurnaçirpal (cf. Ernst Müller, ZA. i. 363), and in the el-Amarna texts (cf. ZA. v. 156, 18), etc.

There are several points in Jensen's translation of the Deluge-text which I do not approve of, and I hope to find the time to discuss some of them. It is undoubtedly true that the interpretation of the Deluge-text has been much advanced since I published my commentary thirteen years ago, chiefly through the works of Delitzsch and Zimmern;* but several of Jensen's remarks criticizing my translation† of 1881 are just as gratuitous as the specimens quoted above.

Let me give one additional exemplification. I said in 1881 that the cuneiform epithet of the Babylonian Noah, *Atra-xasis* or *Xasis-atra*, i. e. *Ξισουθρος*,‡ had about the same meaning as the Hebrew אִישׁ צַדִּיק וְתָמִים 'a just and perfect man,' as Noah is called in the priestly narrative of the Biblical Flood. I stated that *Xasis-atra* meant 'wise and reverential, God-fearing.' Now Jensen remarks (*Cosmol.*,

* Cf. e. g. Zimmern, *Buss-psalmen*: 26. 1 (*Pir-napištim*); 118. 1 (*attari*, Delitzsch); 47 (*dipārāti*); 55. 1 (*šaxarratu*); 17 (*naphusu*); 20. 10 (*letu*);—Delitzsch, *Wörterbuch*: 67 below (*Ubara*); 205 (*Ubara-Tutu*); 168. 1 (*Adar*); 185 (*māraḳu* 'length!'); 139, below (*šar*); 248 (*ezub*); 127 (*āde sibišu*); 126. 4 (*kīru*); 135 (*ādānu*); 143 (*igrida*); 133 (*adī* 'along with'); 321 (*kukki*); 274 (*tābat rigma*); 314 (*iārēti*); 238. 3 (vi. *urra*, vii. *māšāti*); 288, below (*mexā*); 237 (*urru imtāgut*); 210 (*ana nāši ul iddin*); 120. 3 (*adagur*); 222 (*aban kišādī*); 262 (*xasisu*); 250 (*itéziz*); 168. 2 (*Atraxasis*: cf. *Beitr. z. Assyriol.*, ii. 401), etc., etc.

† On p. 367 of his *Cosmology*, Jensen speaks of my *Uebersetzungsversuche*!

‡ As I stated in my note on *Gilgameš*=Γίλγαμος (*A. O. S. Proc.* for April, 1893, p. ix, n. †), Mark Lidzbarski suggested that *Ξισουθρος* might be the prototype of the Arabic *el-Khidr*, living at the confluence of the two great rivers (Koran, sura 18. 59 ff.), who is identified with the prophet Elijah, St. George, and the prime minister of Alexander the Great:  means 'bluish green,' like γλαυκός; and, of course, the Greek sea-god Γλαυκός (Πόντιος) is the same mythical personage (ZA. vii. 320). Professor Bezold ought to have added (ZA. vii. 109. 2, 320) that Lidzbarski's and Dyroff's remarks had been anticipated by Lenormant, *Les Origines de l'histoire* (Paris, 1882), ii. 13 ("L'analogie est si frappante qu'il est inutile d'insister davantage. J'ajouterai seulement que le mot Khidhr lui-même n'est rien autre que la contraction de la form grecque Xisuthros, ou de la forme babylonienne 'Hasis-Adra, transmise directement aux Arabes sans passer par le grec"). It would also have been well if Professor Bezold, before printing Lidzbarski's and Dyroff's articles in his *Zeitschrift*, had called their attention to Clermont-Ganneau's paper *Horus et Saint Georges*, published in the *Revue archéologique*, nouvelle série, xxxii. 388–397, and cited by Lenormant, l. c. Compare also Lidzbarski's reply to Dyroff in Parts 3 and 4 (issued Jan., 1894) of Bezold's *Zeitschrift*, vol. viii.

p. 385) : "Warum an Xisuthros das Moment der Furcht besonders hervorgehoben werden soll, versteht man nicht recht." He fails to see why a word implying fear should be used as an epithet of the Babylonian Noah, who braved the terrors of the Deluge. Professor Jensen evidently considers this a very clever remark, otherwise he would not have distorted the facts in order to be able to bring it in. He knows, of course, as well as I do, that there is a difference between *ehrfürchtig*, *gottesfürchtig*, and *furchtbar*, *feige*. When Bismarck made his famous remark in the Reichstag : "Wir Deutschen fürchten Gott und sonst nichts in der Welt," he did not mean to emphasize "das Moment der Furcht."* I have often noticed that certain men would rather make an inaccurate statement than sacrifice an *aperçu* which they consider "smart." But indeed *Xasis-atra* or *Atra-xasis* after all means 'most reverential or God-fearing, just and perfect,' like the Hebrew **אִישׁ צַדִּיק וְתָמִים**. *Atra* stands, as Professor Jensen rightly pointed out, for *watra* : it is a prefix which has about the same meaning as our prefixed *arch-*, or *arrant*, and is evidently identical with the Aramaic **ܐܬܪܐ** *yattir*,† while Assyrian *xasis* has about the same meaning as Syriac **ܫܚܝܬܐ** ; so that *Atra-xasis* or *Xasis-atra* is **ܫܚܝܬܐ ܐܬܪܐ** or **ܐܬܪܐ ܫܚܝܬܐ**,‡ i. e. 'exceedingly wise.' But wisdom according to Semitic ideas is religion,§ and ungodliness is folly ; the fool says in his heart there is no God ; and in Job xxviii. 28 (a polemical interpolation directed against the tendency of the poem) we read : "Behold, the fear of the Lord, that is wisdom ; and to depart from evil is understanding." I recommend the last statement to Professor Jensen's special consideration.

I need hardly add that the above remarks do not affect my appreciation of Professor Jensen's wide reading and untiring industry, and of the breadth and originality of his views. I would only suggest in the most amicable manner that he select another *corpus vile* when he desires to practice himself in the facetious style of polemics.

* A similar rather "juvenile" remark is Jensen's statement, *Cosmol.*, p. 384 : "*šamaš-napištim* könnte nur bedeuten 'Lebenssonne.' So bezeichnen zwar bei uns Verliebte einander [!], und ein solcher Ausdruck wäre für einen König eine vielleicht auch im Munde eines Babyloniers passende Bezeichnung ; aber warum Xisuthros Lebenssonne genannt werden konnte will mir nicht einfallen." The fact that the reason for a certain name does not occur to Jensen hardly proves that the name is impossible.

† Cf. e. g. Dan. vii. 7, **תְּקִיפָא יְתִירָה** 'exceedingly strong,' or vii. 19, **רַחֲלִיָּה יְתִירָה** 'exceedingly dreadful.'

‡ As Nöldeke, § 245, states, **ܐܬܪܐ** may precede or follow the adjective to which it belongs. In Assyrian the adverbial accusative *atra* seems to have been prefixed in the older period of the language (*Atra-xasis*), and afterwards to have been affixed (*Ξισουθρος* = *Xasis-atra*).

§ See note of my paper *On the Book of Ecclesiastes* in the *Philadelphia Oriental Studies* (Philadelphia, 1894).

11. Hindu Modes and Tunes ; by Rev. Edward Webb, Lincoln University, Pa.

This paper will merely glance at some of the features which distinguish the Hindu system of music from our own.

In editing a book of Christian lyrics for our converts in the year 1853,* it became necessary to study the principles of their musical science. My way was immediately blocked by the discovery that there were no treatises on the subject in the Tamil, the vernacular of that part of India. There was a brief one in Canarese, and others in Sanskrit, of which I could make little use till I should spend valuable time on those languages. I was further hindered by the jealousy of the native musicians whom I employed. All I got through them was by strategy ; for they used every artifice to keep the arcana of their science shut up from my approach.

More than one hundred years ago, Sir William Jones, in Bengal, encountered the same difficulties. His articles on the "Musical Modes of the Hindus" were prepared by the aid of Pundits, employees of the court in which he was presiding judge. With every profession of frankness, these men either misinformed him or concealed the clues to some of the fundamental facts. The articles have been freely used in all encyclopedic notices of this subject. They develop many valuable facts, but contain also not a few errors.

Roman Catholic missionaries have always encouraged the use of native tunes and metres in the public and social worship of their converts. But Protestant missionaries, fearing their influence from association with idol worship in the temples and elsewhere, long opposed their use. Psalms and Hymns in English metres and set to English tunes were provided for them. These continued in general use through all our India missions for nearly half a century.

It is easy to see that these foreign forms would have no attraction, and would prove to be utterly impracticable, for a people who justly boasted a prosody of far greater elaboration than our own, and a musical science hoary with antiquity, which has remained essentially unchanged for unnumbered centuries, being in common daily use among all the nationalities of India, and to which even the most illiterate are passionately attached.

The philosophical works of the Hindus—all, as they claim, divinely inspired—classify the arts and sciences under sixty-four heads. Five of these treat of music. One, the twenty-second, regulates the modulation of sounds. The other four give rules for instrumental music. One is on the lute, another on the flute—the wind and the stringed instruments ; the third and fourth treat of the tambourine and cymbals, which furnish time, measure, and rhythm for the tune. Music and tune are designated by the word *rāka* (Skt. *rāga*), signifying 'love, emotion, passion' ; for they regard this art as the God-given organ to express and impress emotion.

* Mr. Webb was for many years a missionary at Dindigal, in the Madura district, Southern India.

The octave or diatonic scale is, of necessity perhaps, the basis of their musical system, as of our own. Like ours, it has eight notes, the first and the eighth being in unison, with a ratio of one to two. It has also seven divisions or steps, five of which may be termed major and two minor, corresponding to the number of our tones and semi-tones. But here the correspondence ends; for, in their fractional proportions and mathematical ratios, tones and semi-tones differ radically throughout from the European gamut. Each of these seven notes has its name. The first is called Sakshma, the second Rishaba, and so on. Each is also designated by a single syllable, as with us. The syllable used for this purpose is the first of its name; thus, Sa for Sakshma, Ri for Rishaba, and the rest, Sa, Ri, Ga, Ma, Pa, Tha, Ni, for our do, re, mi, etc.; and they answer the purpose in practice quite as well. Two of the tones, the first and the fifth, Sa and Ga, are called *Pirakiruthi* 'unchanged,' because they admit of no modification by division. The others—that is, 2, 3, 4, 6, 7, or Ri, Ga, Ma, Tha and Ni—are variously subdivided. The fourth, or Ma, is divided but once. The other four have each two divisions. There are therefore found in the Hindu scale seven principal and nine subordinate notes, sixteen in all. As the principal, so also the subordinate notes have each its distinctive name, and with these names the musical experts are perfectly familiar. But they all acknowledge that in actual practice one subdivision only is admissible, so that four of the nine are simply theoretical. The American Encyclopedia says that the Hindu gamut is divided into twenty-two fractional tones; but this is an error. Theoretically they have sixteen, practically but twelve, as in our chromatic scale.

Many of their tunes find their most distinctive characteristic and attractive expression in the construction of the descending scale, which, in many of their modes, differs from the ascending both in the order of its tones and subtones and in their mathematical ratio, somewhat as in our minor mode.

Hindu musicians claim that, though their system knows nothing of the intricate harmonies highly admired by Europeans, its attraction and excellence are far superior to ours, both for expression and impression: 1. Because of the scientific and artistic construction of their scales; 2. Because of the charming character and expression developed by them in their system of intervals; 3. Because of the scientific combination and succession which their system accords to these intervals; 4. Because of the skillful application of the variations developed in the descending scales.

The pitch or key of a tune, as well as the intensity and the timbre or quality of the tone, with the time and rhythm of the movement, are applied by us together with the scale in the construction of the tune. All these the Hindus treat with great elaboration as quite distinct though supplementary sciences, under the general term of *Thāla*. The marvelous ingenuity and infinite detail in the construction of the *Thāla* appear in the class-books used in the training of the dancing-girls in the temples. On one occasion I examined these books with some care. I

found them full of mathematical tables for the fractional division of time in their movements. Their practice with these tables extends through a period of eight or ten years of daily exercises. Once I was present when a class of these girls carried on simultaneously five distinct rhythmical movements: one with the right hand; another, and quite diverse, with the left; a third and fourth with each foot; and still another with graceful movements of the head, all the time advancing and receding with instrumental and vocal accompaniment. This was an exhibition of consummate skill under the rules of their Thāla.

I have spoken of the scales and their subdivisions, also of their rules for time, measure, and rhythm. I must now refer to the tunes which are constructed of the scales. They are thirty-two in number, enumerated and described in their shastras. These thirty-two are treated as classical genera, on the basis of which a multitude of others may be and have been composed. Each one of these latter is related to its theme as a species to its genus. Several of these original Vedic tunes are adapted to the several forms of classic verse—one for *Veṇpā*, the best or sacerdotal verse; another for *Akavetpā*, the heroic; another for *Kalippā*, the mercantile; the fourth for *Vanjippā*, the agricultural. Several are called tunes of place, supposed to express or awaken emotions suggested by localities, as maritime, mountainous, or agricultural. Some are appropriated to the seasons, as to spring and autumn; others to the different parts of the day—to morning, noon, or evening. They gravely object to singing or playing a morning tune in the evening hour, when, as they say, the physical and mental condition is relaxed and demands the soothing and rest which the intervals of the evening minor modes suggest and promote. Other adaptations and modes or arrangements of the scales are used for popular songs in religious worship. These last they call *Patha Keerttinai* or Lyrics. Several of the original thirty-two arrangements of the scale are intended for use on special occasions: one to express joy, another sorrow; some for weddings or for funerals, for felicitation or for condolence, for festive scenes, for dancing or for martial inspiration.

Their skilful musicians are very quick not only to detect dissonance or imperfect vocalization, but to criticise severely the admission of intervals that are foreign to the mode or tune announced. After hearing three or four intervals, they will announce the name of the tune, as their scientific classification of tunes is largely determined by the character of the intervals and their order. For this reason they scorn our European music. They despise it. They say it shows gross ignorance of the first principles of the science. I have heard them say that while in many of the arts and sciences, and in the amenities of our social life, we greatly excel, in music and religion we are inferior, shallow, and far in the rear. For with their religion, as with their music, they are intensely conceited. They refer with infinite pride to their amazing chronology as contrasted with the biblical—to their *Brahma-Kalpa* of one hundred days in the life of the god, each of which numbers 4,320,000,000 years—over against our paltry 6,000 years.

The question is often asked how such delicate and intricate modes and melodies are preserved, and how they have been transmitted unchanged, as is claimed, from generation to generation through so many centuries? How have their identity and individuality been protected, with no musical staff or other device by which to make permanent record of the tones and intervals that distinguish them—to say nothing of the time, measure, pitch, and rhythm? To this they reply: 1. These modes and tunes were originally communicated to men by Brahma himself, who carefully guards them, as he does all his gifts; 2. They are all constructed in accordance with natural laws and principles that can suffer no change or variation; 3. By divine provision they were from the first permanently recorded on the lute. This instrument was invented, as they claim, under instruction from Brahma, by Nared, his own son. In the twenty-third of the sixty-four inspired treatises on the arts and sciences it is minutely described, with its seven strings and its key-board for frets, and very specific rules are given for its use; 4. Although they have no device like the European staff on which to record the scales, each of the twelve notes and subnotes, the three key-tones and the seven Thālas, or modes of time, positive and relative, with every prescribed variation of feet, measures, and rhythm, have their own specific name or designation announced in the shastras, and used there in their description, and well-known to every educated Hindu. By these means the preservation and accurate transmission of all the tunes of their elaborate musical system have been perfectly secured, as they claim, through all past ages, and are safe for all coming time.

12. On a Greek Inscription; by Prof. Isaac H. Hall, Metropolitan Museum of Art, New York, N. Y.

This inscription occurs on a bronze object shaped like the head-end of a tenpenny cut nail, with the upper part of the head convex and having rounded corners. Upon the head is a figure now obscure, but apparently the representation of an equestrian soldier. The dimensions of the object are as follows: extreme length, 3.7 centimeters; head, 1.2 centimeters in diameter, .04 thick. Width of sides, .04 at small end, .07 next to head. A hole passes through it from side to side, 2.3 centimeters from long end. The inscription occupies the four sides of the object, two sides having one line each, and two having two lines each. The inscription appears to be of the Byzantine period. The object was found near Tyre, somewhere in the Lebanon. The inscription is as follows, the numbers denoting the sides of the object:

1. ΑΓΙΟC ΚΥΡΙΟC
2. ΙΟΥΔΑΙΑΝΩ
3. *a.* ΤΩ ΔΟΥΔΟΥC
b. ΟΥΤΩΦΟΡΟΗΤΙ
4. *a.* ΟΚΑΤΟΙΚΩΝΕΝΒΟΗΘΙΑ
b. ΤΩΥΨΙCΤΩΒΟΗΘΙ

The hole mentioned above passes through from the end of 1. to the end of 3. On 1., beyond the hole, is an engraved figure which appears to be a circle about a cross, the strokes forming the latter being double, and a stray stroke from the circle making the whole figure, in its present condition, look like a lion. The letters on 1. and 2. are about twice as large as those on 3. and 4. The lines on 1. and 3. stop at the hole, while those on 2. and 4. run to the head. Or, if close measurement is required, the line on 1. is 2.1 centimeters long; that on 2. is 2.5 c. long; those on 3. are 2.1 c. long; those on 4. are 2.85 long. Height of letters on 1., 0.3 c.; on 2., 0.35 c.; on 3., 0.15 to 0.2 c.; on 4., 0.125 to 0.2 c.

Putting it into modern type and separating the words :

"*Ἄγιος Κύριος | Ἰουλιάνῳ | τῷ δούλῳ σ' οὐ τῷ φοροῦντι | ὁ κατοικῶν ἐν βοηθίᾳ | τῷ ἐνψίῳ βοήθει.*"

Perhaps the inscription should be taken as beginning with 2., but the sense would be the same. The chief difficulty is the word at the end of 3 b. I find no example of it elsewhere, and can only conjecture its meaning as something akin to 'supporter' or 'furtherer.' Another difficulty is that of determining the exact meaning of the phrase *τῷ ἐνψίῳ*; but I incline to take it as a dative of manner or degree. The itacisms in the last word of 4 a and 4 b give no trouble; nor the nominative with the (apparent) 2d pers. imperative.

"Holy Lord, who dwellest in help, help most loftily Julianus the supporter (?) of thy servant."

For what purpose the object was made or used, or what more nearly was the purport of the inscription, I cannot determine.

13. The casts of sculptures and inscriptions at Persepolis; by Dr. Cyrus Adler, Smithsonian Institution, Washington, D. C.

The following is a brief note from Dr. Adler's paper*: In the winter of 1891 a private expedition was sent out from England, with the assistance of Lord Saville, for the purpose of securing moulds of the sculptures and inscriptions at Persepolis. The expedition was in charge of Mr. Herbert Weld Blundell, the modeling being done by Mr. Giuntani. As a result, all the important sculptures and inscriptions at Persepolis have been successfully produced in London. Twenty sets have been made from the moulds; and they are offered for sale, for about \$1500 a set, by Mr. Cecil H. Smith, 3, The Avenue, Fulham Road, London, S. W.

Hon. Truxton Beale, who was during this period U. S. Minister to Persia, visited Persepolis during the progress of the work, and received from Mr. Blundell for the U. S. National Museum two paper moulds, which he transmitted to Washington. Plaster casts have been successfully made from these moulds. The one is an inscription of Artaxerxes III. (Ochus), who reigned 358-344 B. C., or, according to some, 359-338 B. C.; the other is the figure of a warrior, probably one of the "Immortal Guard."

* To be published in the Report of the U. S. National Museum for 1893.

14. On a catalogue of the Sanskrit part of the Society's library ; by Dr. Hanns Oertel, of Yale University, New Haven, Conn.

The Librarian's Reports of Additions to the Society's Library form, when taken together, a pretty complete catalogue of the library. There are nineteen of these lists, and one or two of them are given in each of the first fifteen volumes of the Journal except volumes xii. and xiv. Especially notable are the first list of volume vii. (the Bradley books) and the first list of volume xi. (the Thompson books). Since these lists are available as a catalogue only to those who have at hand a full set of the Journal, and since they are, by nature of their arrangement, not convenient for ready use, it cannot be doubted that an alphabetical catalogue of authors and subjects would considerably increase the usefulness of the Society's collection.

To make and print such a catalogue, on the other hand, would involve an expense of labor and money quite disproportionate to the use likely to be made of it : this, partly because of the great number of languages represented, and partly because the collection, as made by donations, is not systematically complete in any subject.* Moreover, the growth of the library would necessitate frequent supplementary lists, so that we should soon be again confronted with the inconvenience already alluded to.

A manuscript card-catalogue is obviously the only solution of the difficulty ; this could be sent, part after part, as finished, to such institutions of learning as desired to have it copied. The copying might perhaps be done by members of the regular library staff or by some interested graduate students. Far the best and easiest way would be, in departments where partly complete printed bibliographies exist (and in Sanskrit such is the case : see Haas and Bendall), to run through the book with the cards, and enter the initials " A. O. S." on the margin opposite the titles of works owned by the Society. This would be satisfactory ; and, if competent volunteers for the really important departments of the library can be found, all that it is desirable to accomplish can be done, and without expense to the Society.

I propose to prepare such a catalogue for the Sanskrit part of the Society's library, and have ready now the first part of it, containing the titles of Catalogues of Sanskrit Manuscripts. Of these there are several not mentioned in Aufrecht's *Catalogus Catalogorum*. The titles are alphabetized according to the name of the author ; and the names of the places where the manuscripts are deposited are entered as cross-

* It is in place here to quote an extract from Prof. W. D. Whitney's open letter to the Members of the American Oriental Society, of April, 1891, page 5 :

"The library has become, after a life of nearly fifty years, one of noteworthy extent and value, especially on account of the long series of publications of learned societies which it contains ; apart from those, it has the miscellaneous and scrambly character which belongs to a collection made by donation only, and in no department completed by purchase."

references. To the titles are added also references to Aufrecht's *Catalogus* and Haas-Bendall's *Catalogue of the Sanskrit and Pali Books in the British Museum*. This first part is to be followed by a *Catalogue of the Sanskrit and Prakrit texts*. I should be very happy to receive suggestions regarding the work.

15. *Hindu Calvinism* ; by Prof. Edward Washburn Hopkins, Bryn Mawr College, Bryn Mawr, Pa.

Under this title was given a translation and criticism of a scene in the third book of the *Mahābhārata* (29-36). The different religious systems of the Epic were spoken of, and the passage under consideration was shown to be early for various reasons. The doctrine taught was analyzed. It is the converse of that teaching which first crops out in the late Upanishads that the *prasāda* or special grace of the Lord suffices to save—being therefore a sort of parallel to the Calvinistic doctrine of salvation by special privilege.* The chief disputant is a woman, who claims that if the Lord saves by grace he damns by cruelty, and : “Man is led about by the Creator like a bull by the nose or a bird by the string. In obtaining good and evil God's will, not man's work, is paramount. Each one is sent to heaven or to hell by the Lord at the Lord's pleasure, not because he deserves it,” etc. (*īcvaraṇprerita*, iii. 30. 28). The queen is then refuted by her husband. He tells her that what she says is heresy (*nāstikyaṃ*), and lays down the admirable principle that works should be disinterested, i. e. without expectation of heavenly reward. “There is no virtue in trying to milk virtue.” (Compare Schiller, *Einem ist sie eine Kuh*, etc.) All this is interesting as a preliminary sketch of the Divine Song, the principles of which are here enunciated without the later Krishnaism. The duel of words concludes characteristically. The king says, and this is his only real argument, that the religious doctrine contradicted by the queen must be true, for “people would not have been good for so many ages if there had not been some reward attached to goodness,” thereby contradicting himself in true Epic style. “But,” he adds, “all this is after all a mystery ; the gods are full of illusion. Do not blame the Lord Creator ; it is through his grace that the mortal who believes attains to immortality.” Then, just as the sage woman in the Upanishads is debarred from too penetrating inquiry by the word “ask no more, or your head will fall off,” so the queen here suddenly recants all that she says. At the end of the recantation, which is apparently a later working over of the text, the queen asseverates that she has learned this “wisdom of Bṛhaspati” as a child in her father's house. It is questionable whether this tag did not originally belong at the end of the first argument. For Bṛhaspati is a seer not over-orthodox in the Epic, and there seems to be less ridi-

* To the title of the paper as well as to any parallelism between Calvinism and this phase of Hinduism exception having been taken in the meeting, it may be well to state that no real Calvinism was seen in the Hindu Epic, only something that reminded the writer very strongly of Calvinism.

cule than historic basis for the fact that he was the seer of the hedonic Cārvāka, who was the infidel and Epicurean (if we may call him so) of failing Brahmanism. There may possibly be some connection between Bṛhaspati's name and rites (sects) not held in much esteem by orthodox Brahmins.

16. Trita, the scape-goat of the gods, in relation to Atharva-Veda vi. 112 and 113 ; by Professor M. Bloomfield, of Johns Hopkins University, Baltimore, Md.

The legend alluded to in AV. vi. 112-13 is stated as follows in MS. iv. 1. 9 (p. 12, l. 2 ff.): "The gods did not find a person upon whom they might be able to wipe off (*mārksyāmahe*) from themselves the bloody part of the sacrifice (that is any one upon whom they might transfer their guilt). Then Agni spake : 'I will create for you him upon whom ye shall wipe off from yourselves the bloody part of the sacrifice.' He threw a coal upon the waters ; from that Ekata was born. (He threw) a second one (*dvitīyam*) ; from that Dvita (was born). (He threw) a third one (*trītyam*) ; from that Trita (was born) . . . The gods came wiping themselves upon (Ekata, Dvita, and Trita) ; they (in turn) wiped themselves upon one who was overtaken by the rising sun, *i. e.* one over whom the sun rises while he is asleep ; this one (wiped himself) upon one who was overtaken (asleep) by the setting sun ; he upon one afflicted with brown teeth ; he upon one with diseased nails ; he upon one who had married a younger sister before the older one was married ; he upon one whose younger brother had married before himself ; he upon one who had married before his older brother ; he upon one who had slain a man ; he upon one who had committed an abortion. Beyond him who has committed an abortion the sin does not pass.'

In TB. iii. 2. 8. 9 ff. the same story is told with variants, the chief difference being that the culminating sin is the slaying of a Brahman : "Beyond the slayer of a Brahman the sin does not pass." Still other versions occur in the Kāth. S. xxxi. 7 ; Kap. S. xlvii. 7 (cf. also ÇB. i. 2. 2. 8 ; KÇS. ii. 5. 26 ; Mahīdhara to VS. i. 23 ; ĀpÇS. i. 25. 15) ; and similar lists of sinful personages are to be quoted from a variety of Sūtras and later Smārta-texts ; they have been assembled by Professor Delbrück in his 'monograph 'Die indogermanischen Verwandtschaftsnamen,' Transactions of the Royal Saxon Society, vol. xi., nr. v, pp. 578 ff. (200 ff. of the reprint) ; cf. also Zimmer, *Altindisches Leben*, p. 315. All those mentioned in the lists are obviously regarded as burdened with guilt (*énaś*) ; and the legend clearly marks them as persons upon whom, therefore, the guilt of others may be unloaded.

Another legend, which reads like a remote echo of the one stated above, occurs at ÇB. i. 2. 3. 1 ff. (cf. SBE. xiii. 47 ff.). Its essence is that Agni, after his three older brothers had worn themselves out in the service of the gods—a story upon which the Brāhmanas are constantly ringing the changes—fled into the waters, lest he should succumb to the same fate. But the gods discovered him there, and Agni spat upon the waters because they had not proved a safe refuge. Thence sprang

the Āptya (cf. *āpya* in the account of the Tāit. Br. above) deities, Trita, Dvita, and Ekata.

"They roamed about with Indra, even as nowadays a Brāhmaṇa follows in the train of a king. When he slew Viçvarūpa, the three-headed son of Tvaṣṭar, they also knew of his going to be killed; and straightway Trita slew him. Indra, assuredly, was free from that (sin), for he is a god.

"And the people thereupon said: 'Let those be guilty of the sin who knew about his going to be killed!' 'How?' they asked. 'The sacrifice shall wipe it off upon (shall transfer it to) them,' they said" (Professor Eggeling's translation). The Āptyas, then, loaded with the guilt (or impurity) of the sacrifice, determine to pass this guilt on, and they pick out as their victim him who performs a sacrifice without conferring the *dakṣiṇā* upon the officiating priest. Further, the impure rinsing-water is poured out for the Āptyas with the formulas, "For Trita thee! For Dvita thee! For Ekata thee!" (cf. VS. i. 23, and Mahidhara's comment thereon).

Similarly Sāyaṇa to RV. i. 52. 5 describes the relation of Trita and the rest of the Āptyas: cf. also his introduction to RV. i. 105.

The human beings upon whom Trita and the other Āptyas wipe off the guilt of the gods deposited in themselves are sinners or outcasts without exception. Aside from the testimony of the legends above, VS. xxx. presents a fictitious, schematic list of human beings, fit to be sacrificed at the *puruṣamedha*, the human sacrifice, and, in verse 9, the *parivitta*, the *parivividāna*, and the *edidhiṣuḥpati* (!) are sacrificed respectively to the female personifications of evil, Nirṛti, Arāddhi, and Niṣkṛti. In ĀpÇS. ix. 12. 11 an expiatory rite is performed for a still larger part of these lists, and in Vasiṣṭha's Dharmasāstra they are designated as *enasvin* 'loaded with guilt (*éna*s).' It follows that Trita must also have committed some crime which fitted him in his turn for the position of scape-goat of the gods. The nature of this crime is, in our judgment, indicated in part in the version of the legend in ÇB. above. Indra's drastic performances upon the great variety of demons whom he slays, coupled as they are at times with wiles and treachery, have not failed to arouse the compunctions of a certain school of Vedic moralists, who contemplate his exploits with mingled sorrow and fear for Indra's position as a righteous god. So e. g. in TB. i. 7. 1. 7. 8; PB. xii. 6. 8; and MS. iv. 3. 4, Indra is blamed for having betrayed and slain his quondam friend Namuci, and is compelled to perform purificatory rites; see our "Contributions to the interpretation of the Veda," Third Series, J.A.O.S. xv. 160. Similarly, Vṛtra is betrayed in TS. vi. 5. 1. 1-3; MS. iv. 5. 6; PB. xx. 15. 6 ff. Especially the death of Viçvarūpa, Tvaṣṭar's son, is treated by certain texts with a naïve affectation of horror, and accounted as amounting to Brahman-murder, the crime upon which TB. iii. 2. 8. 11 (and other texts quoted by Professor Delbrück above) remarks: 'Beyond the slayer of a Brahman the sin does not pass.' Thus, in TS. ii. 5. 1. 2, the beings (*bhūtāni*) cry to Indra: "thou art the slayer of a Brahman": see also the Çāntiparvan of the Mahābhārata (xii. 13210 ff.), and the Rīg-vidhāna iii. 5. 4.

Since, now, Indra's misdeeds on account of their prominence are likely to have given rise to the notion of misdeeds on the part of the gods (*devāinasā*, AV. vi. iii. 3 ; x. 1. 12), it was natural that some personage closely associated with Indra—a personage, moreover, who could be construed as subservient, or at least ancillary to him—should be picked out for the unenviable position. For this Trita seems fitted in an eminent degree. Trita is in general the double of Indra in his struggle with the demons. A passage like RV. i. 187. 1, *pitūm nū stoṣam . . . yāsya tritō vy ōjasā vrtrām viparvam ardāyat*, 'Let me now praise the drink by whose might Trita tore Vṛtra joint from joint,' suits Indra as well as Trita.* In RV. i. 52. 5 ; v. 86. 1 ; viii. 7. 24 he appears as Indra's coadjutor, and, in the first one of these passages, as Indra's predecessor and model in the fights against the dragons. In x. 48. 2 Indra gets the cows for Trita from the dragon, and in i. 163. 2 Trita in his turn appears as Indra's servitor, harnessing the horse which Indra rides. Especially RV. x. 8. 8, 'Trita Āptya, knowing (the nature of) his weapons, derived from the Fathers, and impelled by Indra, fought against the three-headed and seven-rayed (monster), and, slaying him, freed the cows of the son of Tvaṣṭar.' Compare also ii. 11. 19.

Whether, now, we regard Trita as the faded predecessor of Indra in the rôle of a demiurge, being, as it were, the Indo-Iranian Hercules (cf. the Avestan Thraetaona Athwya), supplanted in part in the land of the seven streams by Indra ; whether we regard him, as would appear from some passages of the Rîg-Veda, as Indra's lieutenant ; or whether we follow Bergaigne, *Religion Védique*, pp. 326, 330, in viewing him as a divine sacrificer ; in each case the moralizing fancy, which would whitewash the cruelties incidental upon Indra's valued services, naturally alights upon Trita, and makes him bear the burden of his superior's misdeeds. And this again has been generalized so that in AV. vi. 113. the gods in general, without specification, are said to have wiped off their guilt upon Trita.

The rites within which AV. vi. 113. 114 are embedded in the Kāuṣika-sūtra (46. 26-29), in their turn, have for their object the removal of the sin of him whose younger brother marries first, as also of the prematurely married younger brother. Symbolically the sin is again removed, this time to a non-living object, being washed off upon reeds which are then placed upon foam in a river. As the foam vanishes, so does the sin.

The treatment of the Kāuṣika embraces but one side of the hymn in employing it in connection with the expiatory performances of the *parivitta* and the *parivividāna*. It seems to me that this is too narrow, and that the hymns were constructed to cover all the crimes in the catalogues connected with the legend of Trita, as given above. This at least is in Keçava's mind when, commenting upon Kāuṣ. 46. 26 ff., he says, "now the expiation is stated for him who marries, performs the rite of building the fire, and undergoes the consecration for the Soma-sacrifice,

* Cf. our 'Contributions,' Fifth series, J.A.O.S. xvi. p. 32, and Yāska's Nirukta ix. 25, where Indra is substituted outright.

while the older brother is alive." Further, the text of both hymns (vi. 112. 3; 113. 2) states distinctly that the sins in question shall be wiped off upon the abortionist, the *bhrūṇahan*, whose crime figures as a most shocking one at the end of the lists.

This indicates that the entire list of sins is in the mind of the poet, even though he intends to direct his charm against some special part of them. Finally, the expression *dvādaśadhā* in vi. 113. 3, 'Deposited in a dozen places is that which has been wiped off on Trita, namely the sins belonging to man,' refers in my opinion again to the list of crimes, which are stated variously as from 9-11 in number, the use of the number 12 being due to its formulary and solemn character. From all this it seems to me that the hymns have in mind at least all the sins which arise from the inversion of the order of precedence as between the younger and older brothers, and probably the rest also.

The two hymns again present a marked instance of the close interlacing between the legendary material of the Brāhmaṇas and the Mantras.* I doubt whether the true purport of them would ever have become clear without the legends reported above, and their previous treatment owes a certain degree of vagueness to the absence of these legends from the apparatus of the translators.

The hymns have been translated by Ludwig, *Rig-Veda* iii. 439, 444; by Grill,² pp. 15, 171; Hardy, *Die Vedisch-brahmanische Periode*, p. 201; cf. also Zimmer's luminous allusion to vi. 113 in his *Altindisches Leben*, p. 315; and Ludwig (l. c., p. 469, 470). Grill treats both hymns rather too vaguely, under the caption "Krankheit" (pp. 8 ff.). The *Anukramaṇī* defines vi. 112 as *āgneyam*; vi. 113 as *pāuṣṇam*.

I add the translation of the two hymns, undertaken in the light of the preceding exposition:

vi. 112. 1. May this (younger brother) not slay the oldest one of them, O Agni; protect him so that he be not torn out by the root! Do thou here cunningly loosen the fetters of Grāhi (attack of disease); may all the gods give thee leave! 2. Free these three, O Agni, from the three fetters with which they have been shackled! Do thou here cunningly loosen the fetters of Grāhi; release them all, father, sons, and mother!† 3. The fetters with which the older brother, whose younger brother has married before him, has been bound, with which he has been encumbered and shackled limb by limb, may they be loosened; since fit for loosening they are. Wipe off, O Pūṣan, the misdeeds upon him who practices abortion!

vi. 113. 1. On Trita the gods wiped off this sin, Trita wiped it off on human beings; hence, if Grāhi has seized thee, may these gods remove her by means of their charm. 2. Enter into the rays, into smoke, O sin; go into the vapors, and into the fog! Lose thyself with the foam of the river; wipe off, O Pūṣan, the misdeeds upon him who practices

* Cf. my 'Contributions.' Third series J.A.O.S. xv. p. 163; Fifth series, ib. xvi. p. 3.

† That is, release the entire family from the consequences of the misdeeds of certain members (the sons).

abortion ! 3. Deposited in twelve places is that which has been wiped off Trita, the sins belonging to humanity ; hence, if Grāhi has seized thee, may these gods remove her by means of their charm !

17. On the group of Vedic words ending in -gva and -gvin ; by Professor Bloomfield.*

In 1852, Professor Roth in his note on Nirukta xi. 19 (p. 149) said somewhat as follows : " The suffix -gva is to be found outside of *navagva* and its correspondent *daṣagva* only in *etagva* and *atithigva*. An extension of it seems to be -gvin in *ṣatagvin*. If we look for a unity of meaning for the suffix in all these formations, we must assume for it, as well as for the related suffix -gu, which occurs in a considerable number of compounds, a broad meaning, something like 'having the kind, form, number of.' " And further, "*navagva* and *daṣagva* könnte die 'Neuner, Zehner,' d. h. die Glieder einer sovielen Theile zählenden Gemeinschaft, *etagva* ein buntgearteter, *ṣatagvin* hundertfach sein." The suggestion of a similar view may be found also in Benfey's glossary to the Sāma-Veda, s. v. *etagva* and *navagva*. Ludwig's translations are along the same line : see, for instance, RV. i. 159. 5 (171) ; viii. 45. 11 (603). Grassmann in his concordance essays to lend etymological support to this kind of construction, by assuming a stem -gva 'coming,' from a root *gvā* 'to come,' an "older" form of the root *gā*, having in mind doubtless the labialized forms of the root in *βaiva*, *venio*, etc. : cf. his somewhat similar misconception of the interrogative stem *ku* (s. v.). It is, however, not worth while to discuss subtle phonological questions in this connection, since a correct philological interpretation of these suffixes obviates the necessity of stepping outside of ordinary grammatical experiences. The stems are -gv-a and -gv-in ; and *gu* is the well known weakest stem-form of *go* 'cow.'

The word *ṣata-gv-in* speaks most plainly ; it means 'possessing, or consisting of, a hundred cows,' and one needs but to present the five passages in which the word occurs to put the question as a whole upon a firm basis : RV. i. 159. 5, 'To us, O heaven and earth, give wealth rich in goods, containing a hundred cattle (*ṣatagvinam*)' ; iv. 49. 4, *rayīm ṣatagvinam ācāvāntaṃ sahasrīṇam*. And again : viii. 45. 11, 'going easily, O thou to whom belongs the press-stone (Indra), rich in horses, having a hundred cows' (*ācāvāntaḥ ṣatagvinah*) ; ix. 65. 17, *ṣatagvinam gāvām pōṣaṃ svācīryam* ; ix. 67. 6, *ṣatagvinam rayīm gómāntam ācvinam* : cf. in general RV. ix. 62. 12.

The word *ṣatagvin* does not differ in structure fundamentally from *saptāgu* in RV. x. 47. 6, 'to Bṛhaspati, who gives (or obtains) seven cows (*saptāgum*).' The words *saptāgu* and *rayīm* in the relation of cause and effect are obviously parallel to *ṣatagvinam* and *rayīm*. And in Gāut. Dharmāç. xviii. 26, 27 ; Manu xi. 14 ; Mahābh. xiii. 3742, *ṣatāgu* and *sahasragu* are later representatives of such formation : cf.

* First read before the Johns Hopkins Philological Association, March 17, 1893 ; see Johns Hopkins University Circulars, vol. xii, no. 105, p. 90.

also *ekagu*, Vāit. Sū. 24. 20. But the additional suffix *-in* (*çata-gv-in*) does impart to the word a more general adjectival value, rendered with difficulty in English by "hundred-cow-like;" and at any rate the word is on the road to a meaning like 'hundredfold' even in RV. ix. 65. 17, *çatagvinam rayiṁ gómantam*, where *çatagvinam* is sufficiently faded and generalized to admit of the additional *gómantam*. This is therefore not precisely tautological; the expression as it stands is to be rendered 'hundredfold wealth abounding in cattle.' And so the poet finds it possible in RV. viii. 1. 9 to address Indra thus: *yé te sánti daçagvinaḥ çatino yé sahasrīṇaḥ* . . . 'with thy horses in tens, hundreds, and thousands!'^{*}

The proper name *atithigvā* has, so far as is known, never been translated. Grassmann's *-gva* 'going' does not yield appreciable sense.

If we analyze structurally *atithi-gv-ā* 'he who has or offers a cow for the guest,' 'he who is hospitable,' we have a normal compound, normal sense, and a valuable glimpse of Vedic house-practices, known hitherto only in the Brāhmaṇas and Sūtras. At the *arghya*-ceremony, which is performed on the arrival of an honored guest, the "preparation" of a cow is the central feature. The technical expression is *gāṁ kurute*: see ÇGS. ii. 15. 1; AGS. i. 24. 30, 31; PGS. i. 3. 26, 30; Gobh. iv. 10. 1; ĀpGS. 13. 15; HGS. i. 13. 10; ApDhS. ii. 4. 8. 5. In TS. vi. 1. 10. 1 the ceremony goes by the name *go-argha*. There is no reason why this simple and natural practice should not be reflected by the hymns, and it comports with the character of *Atithigva* as a generous giver: cf. vi. 47. 22; x. 48. 8; i. 130. 7, also similar statements in reference to descendants of *Atithigva* (*ātithigvā*) in viii. 68. 16, 17. The adjective *atithin* is a *ἀπ.λεγ.* in RV. x. 68. 3; it occurs in the expression *atithinir gāḥ*; and, whatever it may mean, it suggests forcibly the proper name in question. The rendering of *atithin* by 'wandering,' as given by the Petersburg lexicons and Grassmann, is based upon the supposed etymology (root *at* 'wander'), and reflects the vagueness usual with such interpretations. Ludwig's translation (972) "wie gäste kommend" is a compromise between the etymology and the ordinary

^{*} The Homeric *bahuvrīhi*-compounds *τεσσαρά-βο(F)-ιος* 'worth four steers,' and similarly *έννεά-*, *δωδεκά-*, *έεικοσά-*, *έκατόμ-βοιος*, suggest, along with the Vedic words, that the I. E. word *gōu-* was a prominent unit of count. The weak stem *gu* at the end of a possessive compound appears in *έκατόμβη*, which almost reflects a possible Vedic **çata-gv-ā* 'a body of hundred cows or steers.' *έκατόμβη* has undergone a somewhat similar fate with *çatagvīn*; it means originally 'a sacrifice of a hundred steers,' but the meaning of its component parts must have been thoroughly lost sight of before Peleus, Il. xxiii. 146, could promise a hecatomb of fifty rams; cf. also the *ταύρων τε καί άρνειών έκατόμβη*, Od. i. 25, and the *έκατόμβη ταύρων ήδ' αίγών*, Il. i. 315. In a different way the meaning has faded out of *βου-ιν βουκόλος*, so as to enable it to appear in the compound *ίπποβουκόλος* 'horse-herd.' Another type and use of numerals in composition with the stem *gōu* is exhibited in the Phrygian proper name *Οκταγώς* (cf. *saptāgu*, and *navagvā*, *daçagvā*, below); see *Bezz. Beitr.* x. 196; *Indog. Anzeig.* ii. 15.

meaning of *ātithi*. The passage in question reads: 'Bṛhaspati has divided out like barley from bushels the (rain-) cows propitious to the pious, fit for guests (*ātithin*), strong, desirable, beautiful in color, faultless in form, after having conquered them from the clouds.' The proper name *ātithi-gv-ā* means therefore precisely one who has *ātithinṛ gāh*.

It seems scarcely possible to hesitate, after these considerations, when we come to analyze the words *navagvā* and *daçagvā*. Whatever their precise meaning, they also are *bahuvrīhi*-compounds, containing the stem *gu-* 'cow'; and the proof may be rendered on the severest technical grounds. As the outflow of Indra's supreme power to obtain the cows (waters) from the mountains (clouds), the same capacity appears delegated to Bṛhaspati, frequently with the qualifying attribute *Aṅgiras* or *Āṅgirasa*; next, to the *Aṅgirases* themselves; further, to the *Navagvas* and *Daçagvas*, who are also frequently designated as *Aṅgirases*; and finally, to *Saramā* in the specific character as a messenger of Indra. Bṛhaspati *Āṅgirasa* is designated as *saptāgu* in x. 46. 7. Indra, the *Aṅgirases*, Bṛhaspati, and *Saramā* appear in the same exploit in i. 62. 3: cf. in general the hymns x. 67 and 108. Statements of this sort which concern the *Navagvas* and *Daçagvas* are found in RV. x. 62. 6, 7; v. 29. 12; 45. 7; and similarly x. 108. 8; iii. 39. 5. Note also the more general relation of *nāvagva* in ix. 108. 4 to *gāh* in st. 6; of *nāva-gvāh* to *gopām* in x. 61. 10 and of *dāçagvāh* to *gōarṇasā* in ii. 34. 12. In these passages the poet at any rate must be conscious of a relation between the element *-gva* and the stem *go* or its derivatives. Without entering here upon a complete discussion of all the mythological ideas involved (cf. Bergaigne, *Religion Védique* ii. 307 ff.), it seems to me that we must choose one of two interpretations of *-gvā* in these two names. Either the *Navagvas* and *Daçagvas* are heavenly assistants of Indra or Bṛhaspati, and distinguished themselves in these exploits by obtaining or freeing nine or ten of the cloud-cows; or, like the *Aṅgirases*, they are mythical sacrificers who, by giving nine or ten cows, strengthen Indra or Bṛhaspati in his attacks upon the cloud-cows. In fact, the name seems to carry a changeable force involving both aspects, just as the epithet *saptāgu* applied to Bṛhaspati in x. 47. 6 clearly implies his participation in the heavenly exploit, and at the same time the generous bestowal of cattle upon the reverent sacrificer who praises him with songs. But even a future modification of this view cannot impair the fundamental fact that these words are possessive compounds with stem *gu-* as their second member.

The ending *-gva* occurs in one other word, *étagva*. Grassmann, under the coercion of his theory that *gva=gā* 'go,' translates it by "coming quickly, hurrying"; the Petersburg lexicons by "bunt schimmernd"; Ludwig at i. 115. 3 (128) by "schillernd," but at vii. 70. 2 (54), and viii. 59. 7 (613) by *Étagva*, a makeshift clearly indicative of embarrassment. Sāyaṇa's comments do not present anything tenable so far as *-gva* is concerned. The interpretation of *gva* becomes simple enough if we follow the lead of the other words of the group; it contains the stem *gu* 'cow' in the sense of 'ray'; *étagva* means 'having bright rays,' and

so 'shining brightly.' In v. 80. 2-4 Uṣas is spoken of as follows : *bṛhad-rathā . . . eṣā góbhīr aruṇēbhir yujānā . . . vyenī bhavati*; the cows can scarcely refer to anything but rays, or sheets of light.

In conclusion, a few brief remarks, suggested by the preceding investigation : Another case of a word misunderstood as a suffix is contained in *viṣṇu*. This is explained by the lexicons as a derivative of root *viṣ* : I would propose to analyze it as *vi-ṣṇu* 'crossing the back (of the heavens)'; cf. the constant use of the root *kram* + *vi* in connection with Viṣṇu's three steps. Conversely, a misunderstanding has given rise to a prefix *iṣ* with the root *kr* and with no other root in the sense 'prepare.' There is really no such prefix; it has been abstracted in this single connection from combinations like *āniṣkṛta*, which was misunderstood to be *ān-iṣ-kṛta*, but is in reality *ā-niṣ-kṛta*. In this way arose the expression *iṣkartāram āniṣkṛtam*, RV. viii. 99. 8. That *iṣ* + *kr* is identical with *niṣ* + *kr* appears from a comparison of RV. x. 97. 9 : *iṣkṛtir nāma vo mātā*, with TS. iv. 2. 6. 2 : *niṣkṛtir nāma vo mātā*. Cf. English *apron*, from a *napron*, (felt to be an *apron* : cf. *napkin*), and a host of other examples collected by Mr. Charles P. G. Scott in the *Trans. of the Am. Philol. Assoc.* xxiii. 179 ff.

The difficult word *ādhrigu* I shall hope on some other occasion to explain as *ā-dhrigu* 'not poor, rich, liberal,' *dhrigu* = Zend *drigu* 'poor.' The word is employed as an epithet of both divine and human sacrificers : see especially RV. viii. 22. 11; 93. 11.

18. Notes on Zoroaster and the Avesta ; by Professor A. V. Williams Jackson, of Columbia College, New York City.

I. ALLUSION TO ZOROASTER IN THE SNORRA EDDA PREFACE.

In the preface to the Younger Edda there is a passage relating to Zoroaster which is perhaps worth recording among the allusions to his name found in non-Oriental literature.* The preface to the Snorra Edda after giving a brief sketch of the history of the world down to the time of Noah and the Flood, proceeds to an account of the Tower of Babel and the dispersion of the races through the confusion of tongues. Foremost among the builders of the tower was Zoroaster ; the text adds that he became king of the Assyrians, and that he was the first idolater. In consequence of the confusion of tongues he was known by many names, but chief among these was Baal or Bel.

The text *Edda Snorra Sturlusonar, formáli 2*, ed. Jónsson, p. 5, is here given for convenience of future reference : *Ok sá, er fremstr var, hēt Zōrōastres; hann hlō, fyrr enn hann grēt, er hann kom ī veröldina; enn forsmithir voru II ok LXX, ok svā margar tungur hafa sīthan dreifst um veröldina, eptir thvi sem risarnir skiptust sīthan til landa, ok thjōthirnar fjōlguthust. Ī thesum sama stath var gjör ein hin āgætasta borg ok dregit af nafni stōpulsins, ok köllut Babīlon. Ok sem tungna-*

* My attention was first called to the passage by a passing mention in A. Wirth, *Aus orientalischen Chroniken*, p. xxiv, Frankfurt, 1894.

skiptit var orthit, thā fjölguthust svā nöfnin mannanna ok annara hluta, ok sjā sami Zōrōastres hafthi mörg nöfn ; ok thō at hann undirstæthi, at hans ofsi væri lægthr of sagthri smith, thā færthi haan sik thō fram til veraldligs metnathar, ok lēt taka sik til konungs yfir mörgum thjóthum Assiriorum. Af honum höfst skurthgotha villa ; ok sem hann var blötathr, var hann kallathr Baal ; thann köllum vēr Bel ; hann hafthi ok mörg önnur nöfn. Enn sem nöfnin fjölguthust, thā tyndist meth thī sannleikrinn.

5 (p. 7). *Ok af thessu höfst önnur villa millum Krítarmanna ok Macedoniorum, svā sem hīn fyrri methal Assiriorum ok Kaldeis af Zōrōastre.*

This may be rendered :* 'He who was the foremost (builder of the tower) was called Zoroaster ; he laughed before he cried when he came into the world. But there were (in all) seventy-two master-builders ; and so many tongues have since spread throughout the world, according as the giants were scattered over the land and the nations multiplied. In this same place was built a most renowned town, and it derived its title from the name of the tower, and was called Babylon. And when the confusion of tongues had come to pass, then multiplied also the names of men and of other things ; and this same Zoroaster had many names. And although he well understood that his pride was humbled by the said work, nevertheless he pushed his way on to worldly distinction, and got himself chosen king over many peoples of the Assyrians. From him arose the error of graven images (i. e. idolatry) ; and when he was sacrificed unto, he was called Baal ; we call him Bel ; he had also many other names. But, as the names multiplied, so was the truth lost withal.'

5. ' (From Saturn) there arose another heresy among the Cretans and Macedonians, just as the above mentioned error among the Assyrians and Chaldæans arose from Zoroaster.'

This passage is interesting for several reasons.

First, it preserves the tradition elsewhere recorded regarding Zoroaster's having laughed instead of having cried when he was born into the world. This statement is found in Pliny *N. H.* vii. 16. 15 : *risisse eodem die quo genitus esset, unum hominem accepimus, Zoroastrem.* Again, in the Pahlavi *Dinkart* vii., *pavan zarkhunishno barā khandito* 'he laughed at the time of his birth' (cf. Darab Peshotan Sanjana, *Geiger's Eastern Iranians* ii. 196 note and on p. 200 note, a similar quotation found in Solinus). The same tradition is preserved in the Zartusht Nāmah (cf. Wilson's *Parsi Religion*, p. 483) 'as he left the womb he laughed ; the house was enlightened with his laughter.' In Shahrastānī likewise we read that Zoroaster "as he was born uttered a laugh" (see Gottheil's *Semitic References to Zoroaster in the Classical Studies in Honour of Henry Drisler*). The same, moreover, is noted in the Persian *Dabistan*, Ch. i. Sect. 14, transl. Shea and Troyer, i. 218 : "Zaradusht,

* For some helpful suggestions in connection with the passage I am indebted to the kindness of my friend and colleague, Professor H. H. Boyesen, of Columbia College, and to Mr. E. H. Babbitt.

on issuing forth into the abode of existence, laughed aloud at the moment of his birth."

Second, the two allusions here connecting Zoroaster with Assyria, Chaldaea, and Babylon are to be added to other references which also connect his name with these places (e. g. consult Windischmann. *Zor. Studien*, p. 303 ff.); or again they are to be placed beside the statement of the Armenian Moses of Khorni, who makes Zoroaster a contemporary of Semiramis, and appointed by her to be ruler of Nineveh and Assyria. (See Spiegel, *Eränische Alterthumskunde*, 1. 682.)

Third, in connection with the reputed multiplicity of names of Zoroaster, and the association of his name with *Baal*, *Bel*, attention might be called to the citation in the Syro-Arabic Lexicon of Bar 'Ali (ca. A.D. 832) s. v. *Balaam*, 'Balaam is Zardosht, the diviner of the Magians' (cf. Gottheil, *References in the Drisler Classical Studies*).

II. PLUTARCH'S *Artaxerxes*, Ch. iii. 1-10.

A passage in the above designated chapter of Plutarch is worth considering in the light of ancient Persian antiquities. The famous biographer's life of Artaxerxes Mnemon opens with an account of this ruler's succession to the throne of Darius in B. C. 404, and then describes some of the priestly ceremonies that accompanied the coronation.

Shortly after the death of Darius, the new king went to Pasargadæ, according to Plutarch, to be installed in the kingly office by the Persian priests. The ceremonies were performed in the temple of a goddess whom he compares with the Grecian Athena. But as most of the rites were not public, Plutarch is able to give us only the following details :

Εἰς τοῦτο δὲ τὸν τελούμενον παρελθόντα τὴν μὲν ἰδίαν ἀποθέσθαι στολὴν, ἀναλαβεῖν δὲ ἦν Κύρος ὁ παλαιὸς ἐφόρει πρὶν ἢ βασιλεὺς γενέσθαι, καὶ σύκων παλάθης ἐμφαγόντα τερμίνθον κατατραγεῖν καὶ ποτήριον ἐκπιεῖν ὀυνγάλακτος. (*Plutarchi Vitæ parallelæ, Artaxerxes*, Ch. iii. p. 106, recogn. Sintenis).

This may be rendered : 'After entering the temple, the one to be consecrated must take off his own robe and put on that which Cyrus the Elder had worn before he was king. And then, having partaken of a cake of figs, he must chew some turpentine and drink some acidulated milk.'

A comparison with one or two elements in the sacrifice of the Avestan ritual may naturally be instituted.

First, the suggestion at once presents itself that the "cake of figs," σύκων παλάθης, answers to the Avestan *draonah*, Mod. Pers. *darûn*, which with the milk, butter, fruits, flowers, and small bit of meat, composes the *myazda* or oblation. See Darmesteter, *Zend-Avesta Translation*, i. p. lxvi ; Spiegel, *Avesta übersetzt*, ii. p. xl ; de Harlez, *Avesta traduit*, p. clxxviii ; Haug, 'Some Parsi Ceremonies' in *Essays on the Parsis*, 3 ed., pp. 396, 407.

Second, the mention of the turpentine tree, *τέρμινθος*, naturally suggests the peculiar tasting *haoma* stalks which play so important a part in the Avestan ritual.

Third, the acidulated milk, curds, or whey, *ôḡḡaḷa*, may not unreasonably be identified with the mixture of the *haoma*-juice and milk which was regularly used at the sacrifice : cf. Ys. x. 14 :

Yase-tē bādha haoma zāirē

gāva iristahē bakhšahē

· Whoso, golden Haoma, ever

Drinketh thee when mixed with milk.'

Again, Vd. xviii. 72 *zaothranām haomavaitinām gaomavaitinām . . . hām-irista aētayāo urvarayāo yā vaocē hadhānāpāta* ' libations accompanied by *haoma*-juice and meat, mixed also with the *hadhānāpāta*-plant (benzoin).' Consult also the renderings of Geldner, *Studien* i. 48, and de Harlez, *Avesta Trad.* pp. 289, clxvi.

There is of course nothing certain in the above suggested identifications, but they seem plausible ; and, if we assume that in Plutarch's description there may be some reminiscence of ceremonies that were actually performed when the king was consecrated by the priests, these hints may help to throw some light on the classical passage.

19. On some Hittite seal cylinders ; by Rev. Dr. William Hayes Ward, of New York, N. Y.

Two cylinders were presented for inspection bearing Hittite inscriptions. While many cylinders were known that could safely be ascribed to Hittite art, those having undoubted Hittite inscriptions had not been met with, until these two came to light. One of them is of copper plated with silver, and is said to have been brought, with a number of other antiquities, from Haifa in Syria. It is to the galvanic action of the silver on the copper that we are indebted for the excellent preservation of the outer layer of silver. The cylinder is made of a flat, rectangular piece of metal, bent around so as to bring the opposite edges into juxtaposition, thus forming a cylinder ; but these two edges are not soldered together. The cylinder is 21 millimeters in length by 9 millimeters in diameter. At each end is a rope pattern, enclosed in border lines. On the body of the cylinder is a personage, with what appears to be a crowded and contracted solar disk over his head. He wears a long, loose, open robe, and holds one hand extended, and in the other what appears to be a lituus, with the lower end bent up, as is common in Hittite sculpture. Facing him, but separated by two columns of Hittite characters, is a figure in a close cap, a short robe, with one hand lifted, and the other holding a mace over his shoulder, the top of which is a circle divided in the middle by the handle of the mace. Back to the latter, and with a star between them, is a personage in a high Phrygian cap, a long robe, and with both hands extended in front. The toes of these figures are mostly turned up. Behind the principal figure surmounted by the winged disk are what appear to be hieroglyphs, a bird, and a triangle with a smaller one beside it ; and behind him are two vertical lines of inscription, three characters in each column, unless one of them over the hand of the personage be an

object held in the hand. One of the characters is new, and is identical with the Babylonian character for Harran, and suggests the possibility that it may be the ideograph for that city. While it is of little use to try to read the characters, yet their presence distinctly defines the Hittite style of a considerable family of cylinders which for other reasons we have called Hittite. We have here the rope pattern, the tall Phrygian cap, the turned up toes. There is a considerable body of hematite cylinders of about this size and type which these written characters help us to designate more positively as Hittite, although it has often seemed doubtful whether they should not be called Syrian or Phenician. The shape and size of these cylinders are about the same as those of the hematite Babylonian cylinders of about 2000 B.C.; which inclines one to give them a considerable antiquity, especially as about 1500 B. C. a much larger cylinder came into use, with the advent of the Kassite dynasty, and similar large cylinders were in use in Assyria.

The other cylinder of which I speak is unfortunately in very poor condition. It is of black serpentine, and came from the region of Ūrfa, and is of unusual size, being 56 millimeters in length and 15 millimeters in diameter. Although considerably battered, it is easy to make out that there were on it five lines of Hittite characters, covering the whole surface; but no connected text can be restored. The characters are arranged in the way usual in Hittite inscriptions, two characters often appearing one over the other. One line is wrong side up as compared with the others.

Although of little value as a text, this cylinder is of much value because of its relationship in shape and material with a large class of these large, deeply cut, soft black serpentine cylinders which I have been in the habit, with others, of calling Assyrian, but with a good deal of doubt whether they are really so. These are the cylinders that introduce the winged disk and the sacred tree, elements unknown to early Babylonian art, and especially delight in the fight between Bel and the dragon. It is evident that in the time of the Assyrian empire the art of the country had somehow acquired important elements of mythology not familiar to the early Babylonian empire, and it was not easy to discover evidence whence they came, much as we might conjecture in certain particulars. If then, as this Hittite cylinder seems to indicate, we can refer these large cylinders, so peculiar in character, to a Hittite region, we are in the line of a connection with Egypt. We well know how close was the connection between the Egyptian and the Hittite kingdoms in the time of the eighteenth and nineteenth dynasties; and we may be certain that it was about this time that western Asia felt most markedly the influence of Egypt, the influence previously being chiefly Babylonian. I am inclined to think that the winged disk was brought into western Asia about the time of Thothmes II. or Rameses III., and came to represent the special god of Nahrina, by a sort of religious revolution which modified considerably the idea of the winged disk as it had been known in Egypt, and made of it the only supreme god, so that it was hardly to be recognized and identified

with its Egyptian original, when the iconoclastic heretic king Khuena-ten made it his sole divinity. From the Hittites and the Mesopotamian people the Assyrians accepted the disk and the sacred tree. This would not make this large cylinder and the kindred ones of an age as old as the silvered cylinder of which I have spoken. Indeed, if, as seems probable, this large type was introduced about the time of king Burnaburiash, then we might put these large serpentine cylinders as early as 1300 or 1200 B.C.; and from these large Hittite or Mesopotamian cylinders were copied the later characteristic cylinders of the Sargonide period which we know are Assyrian.

20. A royal cylinder of Burnaburiash; by Rev. Dr. W. H. Ward.

Menant, in his *Les Pierres Gravées*, i. 193, calls attention to two cylinders which bear the name of Kurigalzu, one of the kings of the Kassite dynasty of the old Babylonian empire. They belong to a marked type, larger than those that preceded them, and are characterized by long inscriptions of six or eight lines, generally prayers to a god, with or without the name of the owner. With the inscription there is generally one human figure standing, with one hand raised, and accompanied by symbolic emblems, the most characteristic of which are the Maltese cross, or labarum, and the lozenge. These are new elements in Babylonian art.

A third royal cylinder belonging to this same Kassite dynasty belonged to me but has now been transferred to the Metropolitan Museum. It bears the name of Kurigalzu's father, Burnaburiash, and it is distinctly stated that the owner of the seal, a servant of Burnaburiash, was himself a Kassite. This cylinder belongs to the same general type as those of Kurigalzu, and we may now consider that the Kassite type is pretty certainly fixed.

This cylinder is of a stone intermediate between chalcedony and sard, mainly bluish white, but clouded with a yellowish shade. It is 34 millimeters long by 15 millimeters in diameter, and is thus considerably larger than the Babylonian cylinders of 2000-2500 B. C., but of about the prevailing size and shape of the best cylinders of the period of the Assyrian empire, and of the second Babylonian empire, to both of which we may conclude that these Kassite cylinders gave the type. There is a single human figure in this cylinder of Burnaburiash, of the same type as on the cylinders of Kurigalzu. The entire remaining space is taken up with nine lines of inscription, which Mr. T. G. Pinches has kindly translated for me in part as follows:

1. Rimmon, supreme lord, judge,
2. Who rains, fertility,
3.
4.
5.
6. Uzi-Sutah.

7. Son of Kaššî (i. e. the Kassite),
8. Servant of Burnaburiaš,
9. King of the world.

While Rimmon is a god widely worshipped, the last lines of the inscription are purely Kassite. Not only is the king Kassite, and the owner designated as a Kassite, but the name of a Kassite god enters into the name of its owner Uzi-Šutah. The length of the inscription leaves no room for any symbols, but in shape, size, the style of the human figure, and the length of the inscription, the cylinder is characteristically Kassite.

Of the two cylinders bearing the name of Kurigalzu, one belonged to his son, and one to Duriulmas, the son of his servant. Yet another is figured in DeClercq's Collection, No. 257, of the same type, and belonged to Iriba-Bin, son of Durulmas, probably the same as the owner of the previous seal. Here we have the Kassite type fixed by a series of four cylinders, one of Burnaburiaš, father of Kurigalzu, one of Kurigalzu's son, one of Kurigalzu's servant's son Duriulmas, and one of the son of Duriulmas, or Durulmas, thus giving us four generations. From one or more of these four cylinders we get the cross and the lozenge, and a bird like a dove or raven. A dozen other cylinders of this type could be mentioned, of which not less than half a dozen belong to the Metropolitan Museum.

A very interesting cylinder, now in the Metropolitan Museum, and figured by General di Cesnola, *Cyprus*, pl. xxxi. fig. 3, is of this same type. It is of the usual size and has eight lines of inscription, and the usual standing figure, above which, separated by a line, are two winged sphinxes face to face. This is a new and surprising emblem, and it is not strange that it has led M. Menant to decide that this cylinder must have been made as late as the time of the second Babylonian empire, under an archaizing influence, in imitation of the older cylinders. But it is not clear that such a cylinder, found in Cyprus, may not have been made there in the time of the Kassite dynasty, which was a very powerful one, and which must have extended its influence over the Syrian coast, and probably over Cyprus. In this case a Babylonian officer living in Cyprus might very well have had a seal made after the general style of his country, but the sphinxes would have been copied from the familiar Egyptian art which had spread all along the coast. Indeed, precisely this design of two sphinxes facing each other, is what we find in Phenician or Hittite cylinders, which probably go back earlier than this date. The two sphinxes have just the same relation to the figure under them as the two birds have in one of the Kassite cylinders. There would therefore be no reason for believing this to be a bit of archaizing work of the age of Nabonidus, were it not that it is made of a blue chalcedony, which, so far as we know, came into use even later than Nabonidus; and that the ends are convex, another sign of later execution.

21. On the classification of oriental cylinders ; by Rev. Dr. W. H. Ward.

In this paper an attempt was made to classify the known cylinders according to their national origin and age, separating the different designs, and suggesting a flexible method of enumerating them in a Museum.

22. On the physiological correlations of certain linguistic radicals ; by Professor D. G. Brinton, of the University of Pennsylvania, Philadelphia, Pa.

Of this paper a very brief abstract is as follows. The purpose of the paper is chiefly practical—to dissuade from the use, as signs of relationship between languages, of radicals between which and certain physiological processes correlations exist, in virtue of which a class of articulate sounds are strongly prompted by a class of functions. Imitative or onomatopoetic words are not here meant ; such are the result, not of physiological correlation, but of conscious mimicry. They are words to which their signification is imparted by certain physiological processes, common to the race everywhere, and leading to the creation of the same signs with the same meaning in totally sundered linguistic stocks. These signs I would call “physonyms,” and the process of their formation “physonymous.”

One of the best known and simplest examples is that of the widespread designation of “mother” by such words as *mama*, *nana*, *ana* ; and of “father” by such as *papa*, *baba*, *tata*. Its true explanation has been found to be that, in the infant's first attempt to utter articulate sounds, the consonants *m*, *p*, and *t* decidedly preponderate ; and the natural vowel, *a*, associated with these, yields the child's first syllables. It repeats such sounds as *ma-ma-ma* or *pa-pa-pa*, without attaching any meaning to them ; the parents apply these sounds to themselves, and thus impart to them their signification.

More curious and far-reaching is the correlation between the post-linguals (*k* and *g*) and words of direction and indication, as pointed out also by Winkler. His position could easily be strengthened by numerous further examples. *K* is at the basis of many roots that are local exponents ; with *o*, *u*, and *a*, it is the characteristic element in demonstratives in all Dravidian, Malayan, Melanesian, and Polynesian tongues, in most Australian, and in many Ural-Altaic and American idioms. But the pre-linguals, *t* and *d*, very rarely in primitive tongues are main signifiers of indication from and toward.

Yet more remarkable are the contrary correlations of the nasals, *n* and *m* ; they denote a condition of rest, repose, and inward connection. The contrast of the two classes appears especially in the personal pronouns. In very many diverse languages, *n* and *m* are associated with the first person ; *k*, *t*, and *d* with the second ; almost never the contrary. Thus, *m* and *n* appear in the first person in all Indo-European tongues, all Ural-Altaic, over twenty African, and I should say more

than half the American ; further, in the Hamitic and Semitic groups, and in Australian and Dravidian. And with similar frequency are *k*, *t*, and *d* found in the second person.

In various groups of unrelated languages, *s* is essentially demonstrative and locative ; this is explained by its alternation with *k* and *g*.

In some American tongues we find significant phonetic elements—that is, certain simple sounds always attached to certain classes of perceptions (see my *Essays of an Americanist*, p. 394).

We are driven to assume for these identities a correlation with physiological function, though we have not yet the material for its definition. What we need for the proper solution of the problem is an exhaustive collation of these physonymous radicals from all the languages of the world, an arrangement of them into classes, and then a study of the relations which each class bears to the physiological reactions of the sounds to which it corresponds.

23. On some causes of the Chinese anti-foreign riots of 1892–93; by Rev. Dr. J. T. Gracey, of Rochester, N. Y.

Dr. Gracey presented to the Library of the Society a copy of a Chinese book entitled *Causes of the riots* etc., containing reproductions (reduced in size) of some of the anti-foreign placards which are pasted on walls and otherwise published or circulated in China, and which can be found on sale at the Government book-stalls all over the country.

The superstitious prejudices of the people render them an easy prey to designing leaders. The people in general are of a sufficiently literary turn to be open to literary influences. The literati themselves are the ruling class. In the course of centuries, they have become demagogues adept in inflaming the passions and directing the actions of the people by means of the printed sheet. The Honan province is a powerful center for these evil forces and for their administration. From that center, what we might call a “tract operation” is conducted, which circulates books, placards, etc. gratuitously, and which can at any time produce simultaneous inspiration over all the Yangtse valley and widely over China besides.

The volume is in itself an interesting specimen of the native art. It gives on the one page the placards, and on the opposite page descriptive letter-press in English, explaining the pictures, interpreting the legends inscribed on the various figures therein, and translating the other Chinese matter which the placards contain. All is thus rendered quite intelligible, and is a drastic exhibition of unprincipled scurrility and of a mendaciousness which is to us incredible. The pictures are rude, brightly colored, and often obscene ; but their obscenity is of a kind calculated to arouse in the native the passion of hatred rather than lust, and to occasion in us feelings of simple disgust and indignation. Jesus is called the “Hog ancestor” and is pictured as a hog. Christianity is called the “Foreign devil religion” and the “Heavenly

Hog religion." The missionaries are represented as grossly licentious; and are accused of kidnapping the Chinese children, ostensibly to put them into the Christian schools, but in reality in order that the foreigners may pluck out the children's eyes and hearts wherewith to concoct chemicals for making silver and gold. And so forth.

The introduction to the book gives a good explanation of the book itself and of its relation to national political movements. Closely allied therewith are a couple of matters upon which Dr. Gracey adds a few words.

1. The pensioned army. This is a deep and penetrating cause of ready disturbance and is a constant menace. The million or so of men who were pensioned at the close of the war of the Taiping rebellion were practically pauperized and supported in idleness. They became restless, and wandered over the country, lawless and violent. The opium den became the unit of their organized operations. Substitutes have been hypothecated on the death of the pensioners, and the government so corrupted that no administration has dared to arrest the outflow from the national exchequer to this idle, vicious, and turbulent organization.

2. The secret societies. One of these is the Kolao Hui, a military organization,—originally a benevolent one. It is recruited very extensively from among the soldiers of the war of the Taiping rebellion. In that army were a great many men from Honan, known as the Honan Braves. These men have been the important element in the organized conspiracy against foreigners, which domestically includes the reigning dynasty, who are opposed and hated as foreigners, being Tartar. The Government army is honeycombed with members of the secret society antagonistic to foreigners of all kinds. The Government may not know whether it can depend on the army in an emergency or not.

24. An incident in the life of the illustrious Chinese Buddhist monk, Fâ-hien; by Professor C. R. Lauman, of Harvard University, Cambridge, Mass.

That Ancient India has no history is one of the most important general facts in the history of India, and one of those having the deepest significance. It means that the religious belief of the Hindu of antiquity—be he Pantheist, Buddhist, or what not—is so tinged with pessimism that the examples of public spirit and of faith in high endeavor which culminate, after generations, in a Cavour, a Bismarck, or a Lincoln, are almost grotesquely inconceivable. To comprehend fully the reasons why Ancient India is so barren of great personalities and of the noble records that should enshrine them for the memory of mankind—this is a first great step in the understanding of Hindu character.

And yet, as nineteenth century students of Indic antiquity, we cannot help wishing that there were something in it a little more personal and tangible. It is indeed hard to "draw nigh" to the pale gods of the Rîg-Veda; and as for Brahma, his very essence precludes it. If we

can never become intimate with any ancient Hindus themselves, we should like at least to know some men who have known *them* well. And we want something that was intentionally written for a record. All the more welcome, therefore, are the books, albeit written by foreigners, which were really meant for records, to wit: first, the Greek and Latin accounts which rest on the observations of the generals and followers of Alexander the Great, and on the information that flowed later to the great mart of Alexandria in the Nile Delta; second, the records of the Buddhist pilgrims from China; and third, those of the learned Chorasmian, Albiruni. To test the statements of these foreign records on the touchstone of native evidence and of recent archæological discovery has been one of the most fascinating and rewarding tasks of Indology of the last few years.

Of all the eminent ancient foreign visitors to India, the Chinese pilgrims seem to me to have the most peculiar claim to our sympathy and admiration. The Greeks came for gain and conquest. Not so the bold yet gentle followers of the great and gentle Buddha. Perhaps it will not tax your patience too severely, if I read you a few verses which were inspired by this feeling, and were written as a college exercise in English by one of my Pāli-students at Harvard University, Mr. Murray A. Potter, of San Francisco.

THE CHINESE BUDDHIST PILGRIMS.

Across the Gobi's plains of burning sand
 They crept unmindful of the stifling air.
 Until at length they saw the temples fair
 And thronging marts of stately Samarcand.
 Not there they stopped; but on their little band
 Pursued its way o'er wind-swept passes bare
 And Pamir's icy heights; their only care,
 To reach at last the long-sought promised land.

And now beneath the sacred Bo-tree's shade,
 By fragrant winds of Magadha caressed,
 They humbly bowed themselves, and ever prayed
 That, like their noble teacher, Buddha blessed,
 When death their bodies to oblivion laid,
 They too might gain Nirvana's endless rest.

Before the close of the century that saw the life and works of Jesus, the importation of Buddhist books into China had already begun. Some of the converts were moved to undergo the great perils of a pilgrimage to India, in order to see the places sacred in Buddhist story, and especially the Bo-tree in Magadha. Of these pilgrims, the first to leave a record now accessible to us was Fâ-hien. He started in the year 399 A. D. from Chang'an for India to procure complete copies of the Vinaya-piṭaka, and after an absence of fourteen years returned to Nan-kin, translated some of the books, and wrote the account of his travels.

These travels have been translated from Chinese into English by Professor Legge of Oxford (Oxford, Clarendon Press, 1886); and to them he has prefixed a brief introduction, with details of the author's life culled from a Chinese work named *Memoirs of eminent monks*, compiled in 519 A. D. Some of these I quote:—

His surname, they tell us, was Kung, and he was a native of Wû-yang in P'ing-yang, which is still the name of a large department in Shan-hsi. He had three brothers older than himself: but, when they all died before shedding their first teeth, his father devoted him to the service of the Buddhist society, and had him entered as a Çrāmaṇera ('novice'), still keeping him at home in the family. The little fellow fell dangerously ill, and the father sent him to the monastery, where he soon got well, and refused to return to his parents.

When he was ten years old, his father died; and an uncle, considering the widowed solitariness and helplessness of the mother, urged him to renounce the monastic life, and return to her; but the boy replied: "I did not quit the family in compliance with my father's wishes, but because I wished to be far from the dust and vulgar ways of life. This is why I chose monkhood." The uncle approved of his words, and gave over urging him. When his mother also died, it appeared how great had been the affection for her of his fine nature; but after her burial he returned to the monastery.

On one occasion, he was cutting rice with a score or two of his fellow disciples, when some hungry thieves came upon them to take away their grain by force. The other Çrāmaṇera's all fled, but our young hero stood his ground, and said to the thieves, "If you must have the grain, take what you please. But, sirs, it was your former neglect of charity that brought you to your present state of destitution; and now, again, you wish to rob others.* I am afraid that in the coming ages you will have still greater poverty and distress; I am sorry for you beforehand." With these words he followed his companions to the monastery, while the thieves left the grain and went away, all the monks, of whom there were several hundred, doing homage to his conduct and courage. So far Professor Legge's introduction.

Now there are several considerations which move me to give full credence to this little incident: first, the character of the eminent monk of whom it is related; second, the general nature of the tradition by which it is handed down to us; and third, the intrinsic genuineness and correctness of the Buddhist doctrine which Fâ-hien propounds to the thieves. When tested on the touchstone of the Buddhist Sutta-piṭaka, this correctness is so striking that I am tempted to point out the precise book and chapter which may have suggested to Fâ-hien his ready, appropriate, and courageous words.

* Precisely so the Bodhisat, for example, Jātaka, vol i., p. 133³⁶: especially, *idāni puna pi pāpam eva karosī*.

It is found in one of the Five Nikāyas, the Aṅguttara (iv. 197), and narrates how Mallikā, the queen of Kosala, was rich, and high in the social scale, but yet of a very ugly face and bad figure. She approaches the Buddha to inquire the reason of her unhappy fate. She puts her question in characteristically Buddhist fashion: namely, in a kind of tabular form. She makes four combinations of the two matters of most import to many women, and asks:

- | | |
|----|-------------------------------------|
| 1. | Why is a woman born ugly and poor ? |
| 2. | “ “ “ rich ? |
| 3. | “ “ beautiful and poor ? |
| 4. | “ “ “ rich ? |

The passage has been translated for the third volume of the Harvard Oriental Series by Mr. H. C. Warren. From his version I read some parts:—

“ ‘ Reverend Sir, what is the reason, and what is the cause, when a woman is ugly, of a bad figure, and horrible to look at, and indigent, poor, needy, and low in the social scale ?

“ ‘ Reverend Sir, what is the reason, and what is the cause, when a woman is ugly, of a bad figure, and horrible to look at, and rich, wealthy, affluent, and high in the social scale ?

“ ‘ Reverend Sir, what is the reason, and what is the cause, when a woman is beautiful, attractive, pleasing, and possessed of surpassing loveliness, and indigent, poor, needy, and low in the social scale ?

“ ‘ Reverend Sir, what is the reason, and what is the cause, when a woman is beautiful, attractive, pleasing, and possessed of surpassing loveliness, and rich, wealthy, affluent, and high in the social scale ? ’ ”

[Skipping to Buddha's answer to the second question, which covers Mallika's case.]

“ ‘ And, again, Mallika, when a woman has been irascible and violent, and at every little thing said against her has felt spiteful, angry, enraged, and sulky, and manifested anger, hatred, and heartburning; but has given alms to monks and Brahmans, of food, drink, building-sites, carriages, garlands, scents, ointments, bedding, dwelling-houses, and lamps, and has not been of an envious disposition, nor felt envy at the gains, honor, reverence, respect, homage, and worship that came to others, nor been furious and envious thereat; then, when she leaves that existence and comes to this one, wherever she may be born, she is ugly, of a bad figure, and horrible to look at, and rich, wealthy, affluent, and high in the social scale. ’ * * *

“ When he had thus spoken, Mallika the queen replied to The Blessed One as follows:

“ ‘ Since now, Reverend Sir, in a former existence I was irascible and violent, and at every little thing said against me felt spiteful, angry, enraged, and sulky, and manifested anger, hatred, and heartburning, therefore am I now ugly, of a bad figure, and horrible to look at. Since now, Reverend Sir, in a former existence I gave alms to monks and Brahmans, of food, drink, building-sites, carriages, garlands, scents, ointments, bedding, dwelling-houses, and lamps, therefore am I now rich, wealthy, and affluent. Since now, Reverend Sir, in a former existence I was not of an envious disposition, nor felt envy at the gains, honor, reverence, respect, homage, and worship that came to others, nor was furious and envious thereat, therefore am I now high in the social scale.

“ ‘ * * * From this day forth I will not be irascible or violent, and though much be said against me, I will not feel spiteful, angry, en

raged, or sulky, nor manifest anger, hatred, and heartburning. I will give alms * * *. And I will not be of an envious disposition * * *.”

It is hardly to be doubted that Fâ-hien was well read in the Buddhist scriptures; and it is fairly presumable that he knew this very story. Nevertheless, there is a long way between proving that a thing may be and that it must be. Indeed, there are passages in Sanskrit which may be held to contain the key-note of the monk's warning. Thus, in Çārṅgadharā's *Paddhati*,* no. 274, page 43, ed. Peterson, we read:

*bodhayanti na yācāntē bhikṣācārā grhe-grhe:
dīyatām dīyatām nityam adātuḥ phalam idṛṣam.*

From house to house for alms they go.
They beg not. No! they simply warn :
An if thou givest not to me,
My lot of beggar thine shall be.

The indication of a not improbable source is the only point of my paper; and even that is not certain. But I hope I may not have asked your attention in vain.†

Postscript, dated June 1, 1894, to Prof. Haupt's article on the Flood-tablet, above p. cv.

I find that Prof. Sayce in his new book *The "Higher Criticism" and the Verdict of the Monuments* (London, 1894), p. 110, has adopted Prof. Jensen's translation, 'what I have borne, where is it?' Prof. Sayce has also retained the erroneous translation of *kīma ūri mitaurat usallu*, 'like the trunks of trees did the bodies float.' He also reads *Adra-khasis*, with *d*, instead of *Atra-khasis*, explaining the name to mean 'the reverently intelligent' (l. c. p. 109). Line 164 (cf. NE. 141, n. 12) is translated, 'the great goddess lifted up the mighty bow which Anu had made;' *eteziz*, line 172, 'stood still' (cf. Delitzsch's *Wörterbuch*, 250); line 178, 'who except Ea can devise a speech?'

To the foot-note (p. civ) concerning Peiser's Babylonian map, add the reference: cf. also Alfred Jeremias, *Izdubar-Nimrod* (Leipzig, 1891), p. 37, note.

* Cf. Böhlingk, *Indische Sprüche*,² no. 4489.

† Professor Legge, on page 59, note, observes in passing: "I am surprised it does not end with the statement that she [mother Vais'akha] is to become a Buddha." Some readers may be interested to know that it is a condition, *sine qua non*, for becoming a Buddha that the creature in question should be a human being and of the male sex. *Itthi-bhāvam na gachanti*, 'the Buddhas are never of the female sex,' says the Introduction to the Jātaka, i. 45³.

Other papers were presented, as follows :

25. On Ibrahim of Mosul, a study in Arabic literary tradition ; by Dr. F. D. Chester, of Harvard University, Cambridge, Mass. To be published in the Journal, xvi. 261 ff.

26. On the Arval-song, an Aryan document ; by Dr. E. W. Fay, of Washington and Lee University, Lexington, Virginia.

27. Studies in agglutination ; by Dr. Fay. To be published in the *American Journal of Philology*, vol. xv.

28. Influence of the Christian orient and of Byzantine civilization on Italy during the early middle age ; by Professor A. L. Frothingham, Jr., of the College of New Jersey, Princeton, N. J.

29. On the Kitāb al-Matr of Al-Anzārī ; by Professor R. Gottheil, of Columbia College, New York, N. Y. To be published in the Journal.

30. On numerical formulæ in the Veda and their bearing on Vedic criticism ; by Professor E. W. Hopkins, of Bryn Mawr College, Bryn Mawr, Pa. To be published in the Journal, xvi. 275 ff.

31. On the recently discovered tablet of Raman-nirari ; by Professor D. G. Lyon, of Harvard University, Cambridge, Mass. To be published in the Journal.

32. On contact between the eastern coast of Asia and the western coast of America in pre-historic times ; by Rev. S. D. Peet, of Good Hope, Illinois.

33. Notes on *Die altpersischen Keilinschriften* of Weissbach and Bang ; by Professor H. C. Tolman, of the University of North Carolina, Chapel Hill, N. C. Published in pamphlet form, as a supplement to his *Old Persian Inscriptions*.

34. On foreign words in the Koran ; by Professor C. H. Toy, of Harvard University, Cambridge, Mass.

35. On some points of Arabic Syntax ; by Mr. W. Scott Watson, of Towerhill, N. J.